STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 201040

TO: Michael Borin
Location: rem/2A55/2C70
Art Unit: 1631
Friday, September 15, 2006

Case Serial Number: 10/813856

From: Paul Schulwitz
Location: Biotech-Chem Library
REM-1A65
Phone: 571-272-2527

Paul.schulwitz@uspto.gov

Search Notes

Examiner Borin,

Please review the attached search results.
If you have any questions or if you would like to refine the search query, please feel free to contact me at any time.

Thank you for using STIC search services!

Paul Schulwitz
Technical Information Specialist
REM-1A65
571-272-2527

Search and Information Resources Administration

74104 9-376 201040 MG

STIC-Biotech/ChemLib

From: Borin, Michael
Sent: Friday, September 08, 2006 2:44 PM
To: STIC-Biotech/ChemLib
Subject: Search request: 10/813856

Examiner: M.Borin
AU: 1631
Mailbox:2C70
Office: Remsen 2A55
Tel.: 20713

RE: 10/813856

Please search:

1) polypeptide SEQ ID 2

2) conjugate of SEQ ID No. 2 and a toxin: in CaPlus, please combine Registry search of SEQ ID No. 1 with (toxin or exotoxin or pseudomonas)

3) Inventor's search

Thank you

****
Searcher:_____
Searcher Phone:_____
Date Searcher Picked up:_____
Date completed:_____
Searcher Prep Time:_____
Online Time:_____

****
Type of Search
NA#_____ AA#:_____
S/L:_____ Oligomer:_____
Encode/Transl:_____
Structure #:_____Text:____
Inventor:_____ Litigation:___

****
Vendors and cost where applicable
STN:_____
DIALOG:_____
QUESTEL/ORBIT:_____
LEXIS/NEXIS:_____
SEQUENCE SYSTEM:_____
WWW/Internet:_____
Other (Specify):_____

Instant App.

L2 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:317960 HCAPLUS
DOCUMENT NUMBER: 132:343339
ENTRY DATE: Entered STN: 16 May 2000
TITLE: Substance P-Saporin (SP-SAP) conjugates for reducing pain perception, destroying NK-1 receptor-expressing cells, and treating a NK-1 receptor-associated disorder
INVENTOR(S): Lappi, Douglas A.; Wiley, Ronald G.
PATENT ASSIGNEE(S): Advanced Targeting Systems, Inc., USA
SOURCE: U.S., 21 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: A61K038-00
SECONDARY: A61K038-16
US PATENT CLASSIF.: 514002000
CLASSIFICATION: 1-11 (Pharmacology)
Section cross-reference(s): 63
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6063758	A	20000516	US 1997-890157	19970709
US 2004253248	A1	20041216	US 2004-813856	20040330 <--

PRIORITY APPLN. INFO.: US 1997-890157 A2 19970709
US 2000-523790 A1 20000313

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 6063758	ICM	A61K038-00
	ICS	A61K038-16
	INCL	514002000
	IPCI	A61K0038-00 [ICM,7]; A61K0038-16 [ICS,7]
	IPCR	A61K0038-00 [N,A]; A61K0038-00 [N,C*]; A61K0047-48 [I,A]; A61K0047-48 [I,C*]; C07K0007-00 [I,C*]; C07K0007-22 [I,A]; C07K0014-415 [I,A]; C07K0014-415 [I,C*]
	NCL	514/002.000; 514/013.000; 530/320.000; 530/350.000
	ECLA	A61K047/48R; C07K007/22; C07K014/415
US 2004253248	IPCI	A61K0039-395 [ICM,7]; C07K0014-195 [ICS,7]; C07K0014-415 [ICS,7]; C07K0007-08 [ICS,7]; C07K0007-00 [ICS,7,C*]
	IPCR	A61K0038-00 [N,A]; A61K0038-00 [N,C*]; A61K0047-48 [I,A]; A61K0047-48 [I,C*]; C07K0007-00 [I,C*]; C07K0007-22 [I,A]; C07K0014-415 [I,A]; C07K0014-415 [I,C*]
	NCL	424/178.100; 514/012.000; 514/013.000; 514/014.000; 530/326.000; 530/350.000; 530/370.000; 530/391.100
	ECLA	A61K047/48R; C07K007/22; C07K014/415

ABSTRACT:
The invention provides a conjugate of Substance P (or an analog thereof) and Saporin. A method is provided for reducing the perception of pain by a subject comprising administering to the subject an ED of the pharmaceutical composition of the conjugate comprising Substance P (or substance P analog) and Saporin. Also provided is a method of selectively destroying NK-1 receptor-expressing cells in a subject comprising administering to the subject an ED of the conjugate of

the invention. Further provided is a method for treating a NK-1 receptor-associated disorder in a subject which comprises administering to the subject an amount of the pharmaceutical composition comprising Substance P (or substance P analog) and Saporin, thereby treating the disorder associated with the NK-1 receptor.

SUPPL. TERM: substance P saporin conjugate therapeutic; pain perception
substance P saporin conjugate; NK1 receptor disorder
substance P saporin conjugate

INDEX TERM: Ricins
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(A chain, conjugates with substance P; substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating NK-1 receptor-associated disorder)

INDEX TERM: Tachykinin receptors
ROLE: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(NK1; substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating NK-1 receptor-associated disorder)

INDEX TERM: Proteins, specific or class
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(PAP (pokeweed antiviral protein), conjugates with substance P; substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating NK-1 receptor-associated disorder)

INDEX TERM: Toxins
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Pseudomonas aeruginosa, conjugates with substance P; substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating NK-1 receptor-associated disorder)

INDEX TERM: Proteins, specific or class
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(RIP (ribosome-inactivating protein), conjugates with substance P; substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating NK-1 receptor-associated disorder)

INDEX TERM: Brain
(corpus striatum; substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating NK-1 receptor-associated disorder)

INDEX TERM: Toxins
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(diphtheria, conjugates with substance P; substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating

NK-1 receptor-associated disorder)

INDEX TERM: Spinal cord
(dorsal horn; substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating NK-1 receptor-associated disorder)

INDEX TERM: Proteins, specific or class
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(saporins, conjugates; substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating NK-1 receptor-associated disorder)

INDEX TERM: Analgesics
Cytotoxic agents
Drug delivery systems
(substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating NK-1 receptor-associated disorder)

INDEX TERM: Nerve
(toxicity; substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating NK-1 receptor-associated disorder)

INDEX TERM: Pseudomonas aeruginosa
(toxin, conjugates with substance P; substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating NK-1 receptor-associated disorder)

INDEX TERM: 68181-17-9DP, SPDP, saporin reaction products
ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction; substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating NK-1 receptor-associated disorder)

INDEX TERM: 268202-97-7 268202-98-8
ROLE: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(reaction; substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating NK-1 receptor-associated disorder)

INDEX TERM: 68181-17-9, SPDP
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(reaction; substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating NK-1 receptor-associated disorder)

INDEX TERM: 268202-97-7D, saporin conjugates 268202-98-8D, saporin conjugates
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating NK-1 receptor-associated disorder)

INDEX TERM: 33507-63-0D, Substance P, saporin conjugates 75037-46-6D, Gelonin, substance P conjugates
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating NK-1 receptor-associated disorder)

INDEX TERM: 33507-63-0, Substance P 268202-99-9
ROLE: PRP (Properties)
(substance P-saporin conjugates for reducing pain perception, destroying NK-1 receptor-expressing cell, and treating NK-1 receptor-associated disorder)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S):
(1) Lappi; US 5191067 1993 HCAPLUS
(2) Lappi; US 5679637 1997 HCAPLUS

=> d sqide 1-6

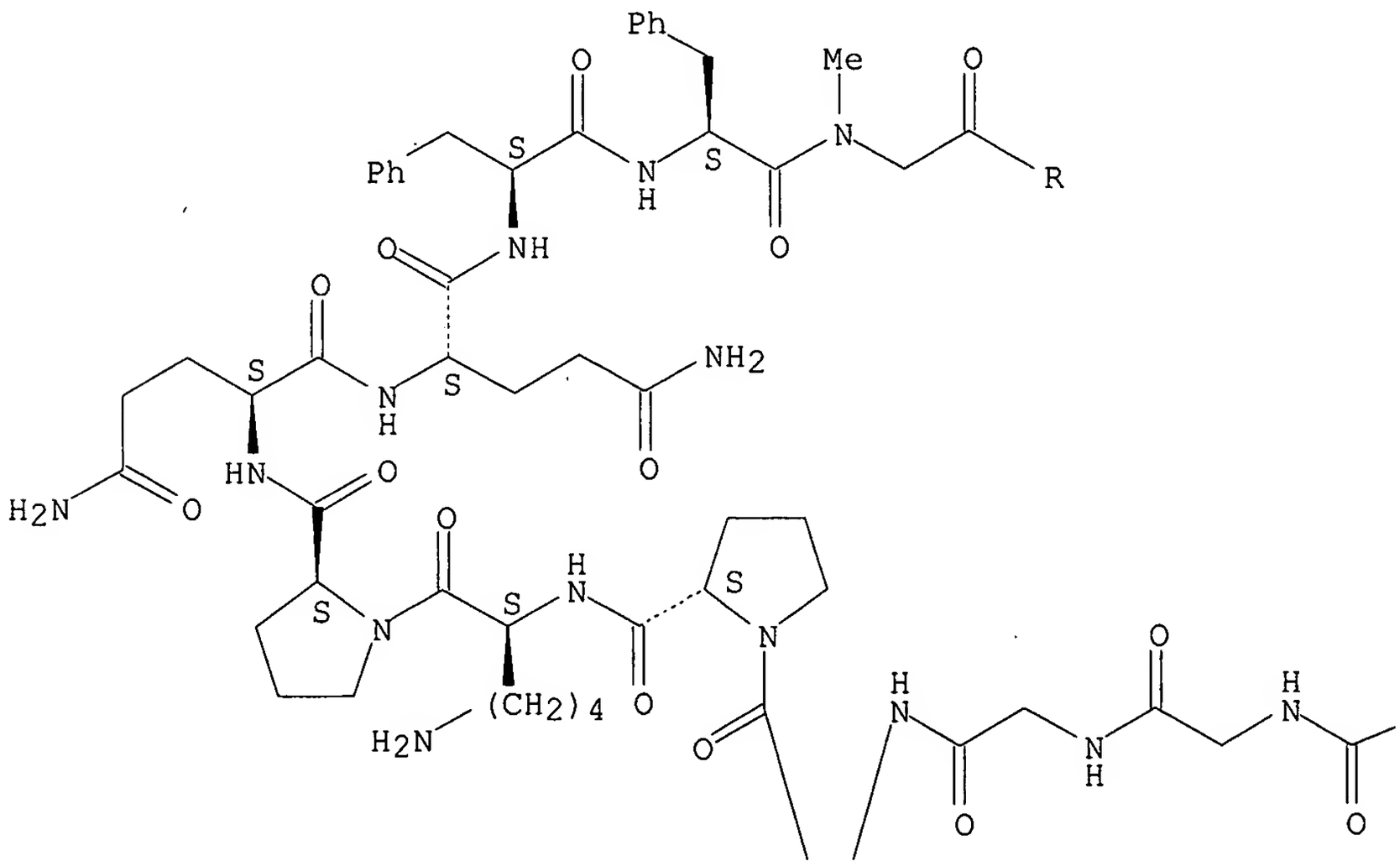
L3 ANSWER 1 OF 6 REGISTRY COPYRIGHT 2006 ACS on STN
RN **268202-99-9** REGISTRY
CN L-Alaninamide, L-cysteinyl-L-tyrosylglycylglycylglycylglycylglycylglycylgl ycyl-L-arginyl-L-prolyl-L-lysyl-L-prolyl-L-glutaminyl-L-glutaminyl-L- phenylalanyl-L-phenylalanyl-N-methylglycyl-3-(methylsulfonyl)- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 19
NTE modified

type	location		description
terminal mod.	Cys-19	-	C-terminal amide
uncommon	Sar-18	-	-
modification	Cys-19	-	methyl<Me>
modification	Cys-19	-	oxygen<2; O>

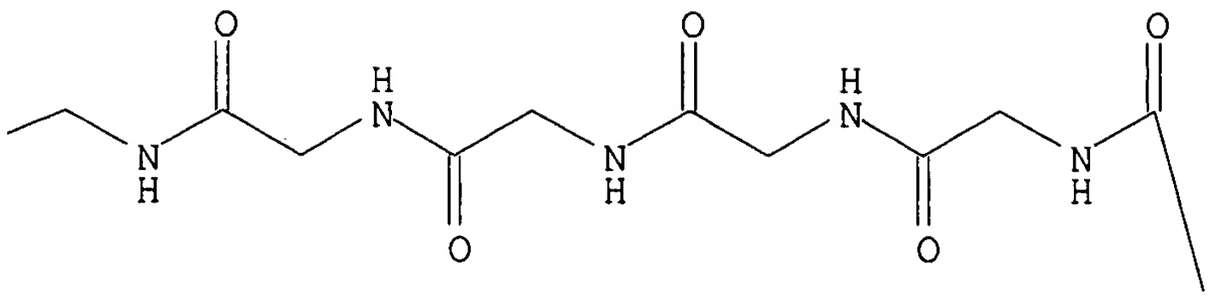
SEQ 1 CYGGGGGGGR PKPQQFFXC
MF C83 H122 N26 O24 S2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PRP (Properties)

Absolute stereochemistry.

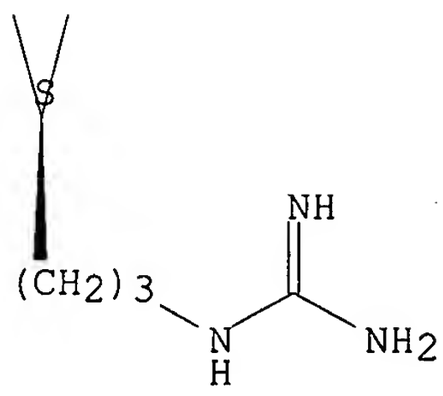
PAGE 1-A

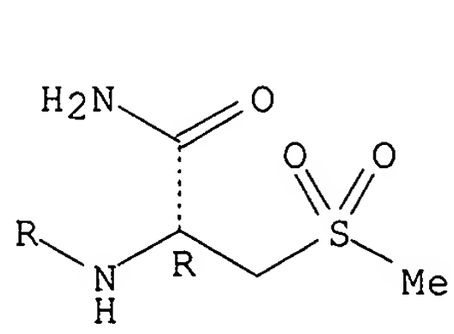


PAGE 1-B

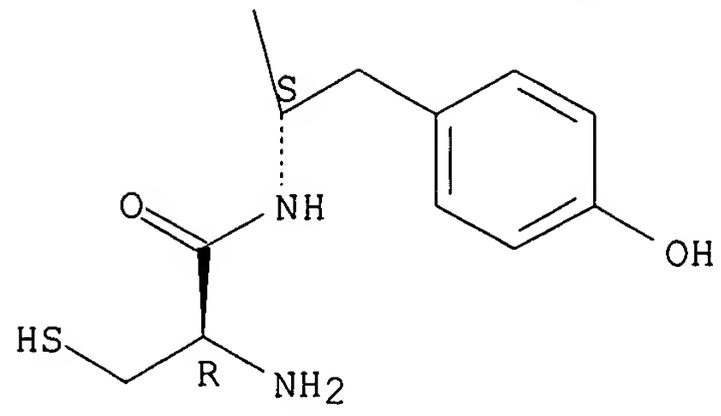


PAGE 2-A





PAGE 2-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2006 ACS on STN
RN **268202-98-8** REGISTRY
CN L-Methionine, glycyl-L-tyrosylglycylglycylglycylglycylglycylglycylglycyl-L-arginyl-L-prolyl-L-lysyl-L-prolyl-L-glutaminyl-L-glutaminyl-L-phenylalanyl-L-phenylalanylglycyl-L-leucyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 2: PN: US6063758 SEQID: 2 claimed protein
CN 6: PN: US6063758 PAGE: 21 claimed protein
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 20

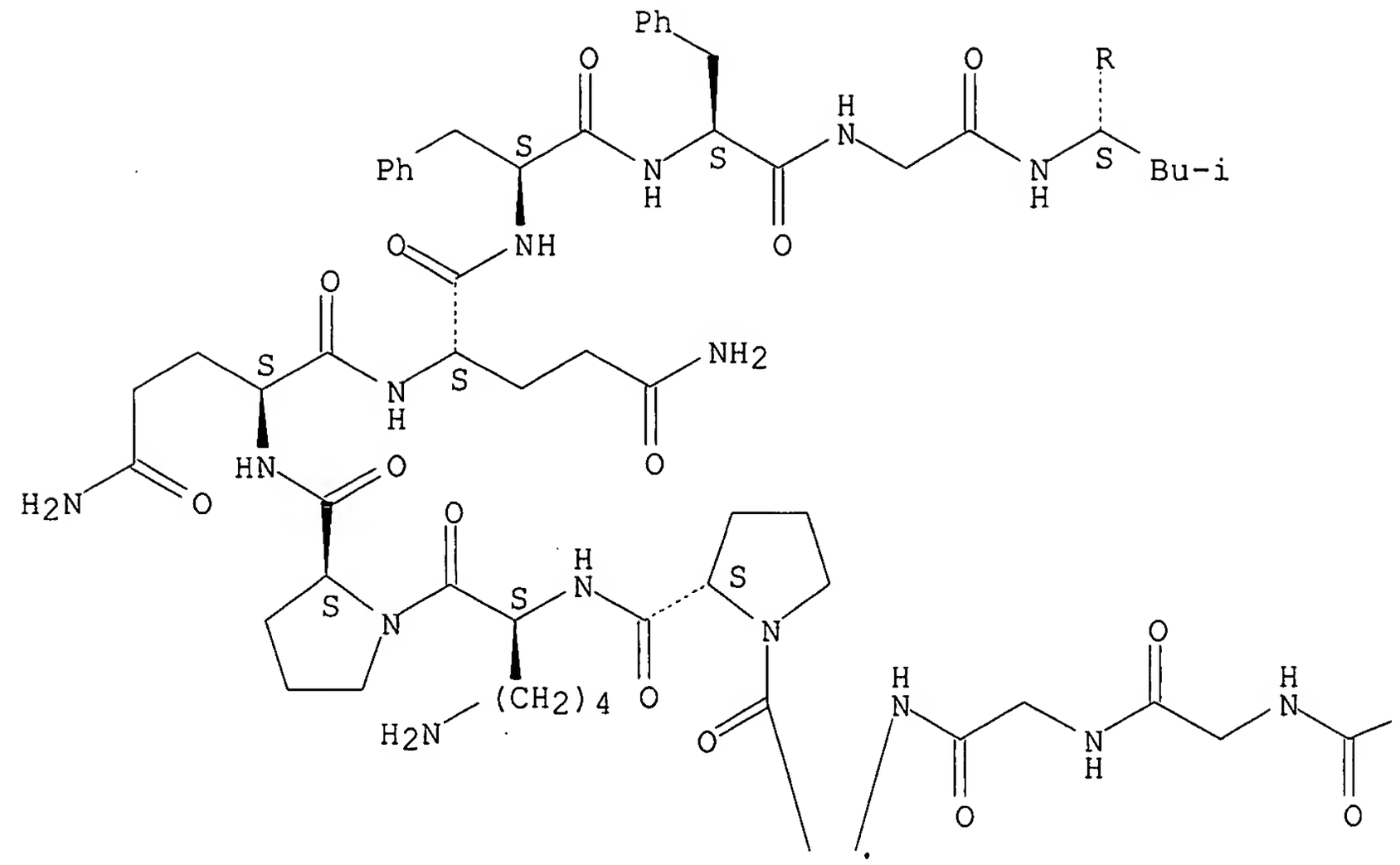
PATENT ANNOTATIONS (PNTE):

Sequence Source	Patent Reference
Not Given	US6063758 claimed SEQID 2
	US6063758 claimed PAGE 21

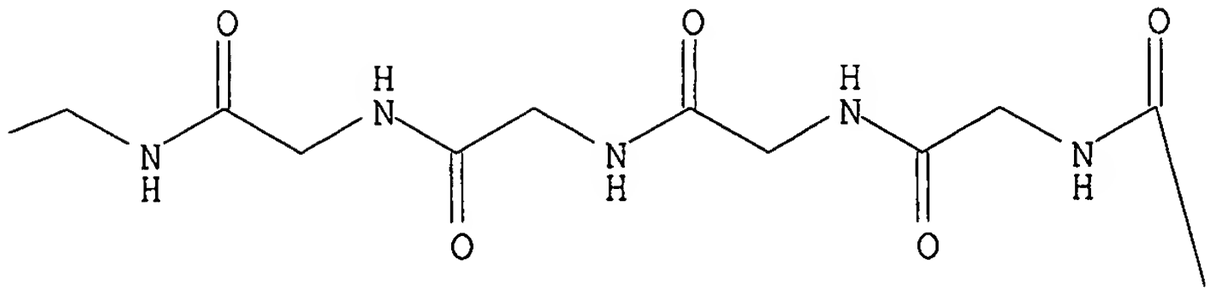
SEQ 1 GYGGGGGGGR PKPQQFFGLM
MF C88 H130 N26 O24 S
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PRP (Properties); RACT (Reactant or reagent)
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); PRP (Properties); USES (Uses)

Absolute stereochemistry.

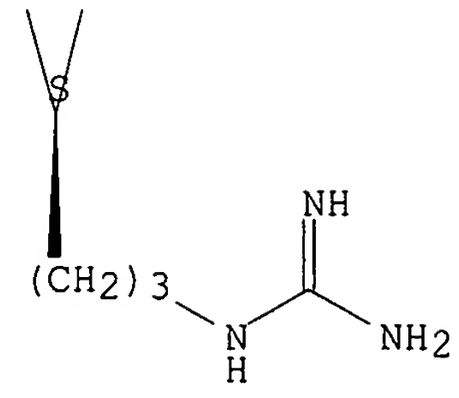
PAGE 1-A

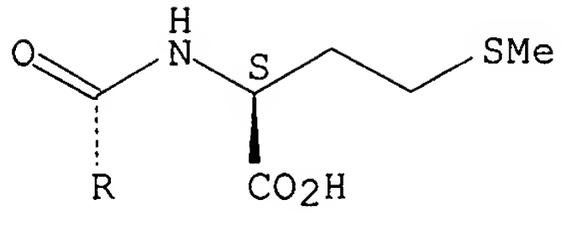


PAGE 1-B

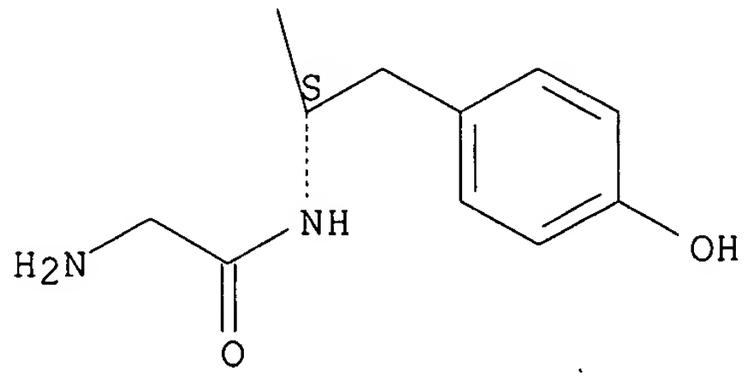


PAGE 2-A





PAGE 2-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2006 ACS on STN
RN **268202-97-7** REGISTRY
CN L-Alaninamide, glycyl-L-tyrosylglycylglycylglycylglycylglycylglycylglycyl-L-arginyl-L-prolyl-L-lysyl-L-prolyl-L-glutaminyl-L-glutaminyl-L-phenylalanyl-L-phenylalanyl-N-methylglycyl-3-(methylsulfonyl)- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1: PN: US6063758 SEQID: 1 claimed protein
CN 5: PN: US6063758 PAGE: 21 claimed protein
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 19
NTE modified

type	location		description
terminal mod.	Cys-19	-	C-terminal amide
uncommon	Sar-18	-	-
modification	Cys-19	-	methyl<Me>
modification	Cys-19	-	oxygen<2; O>

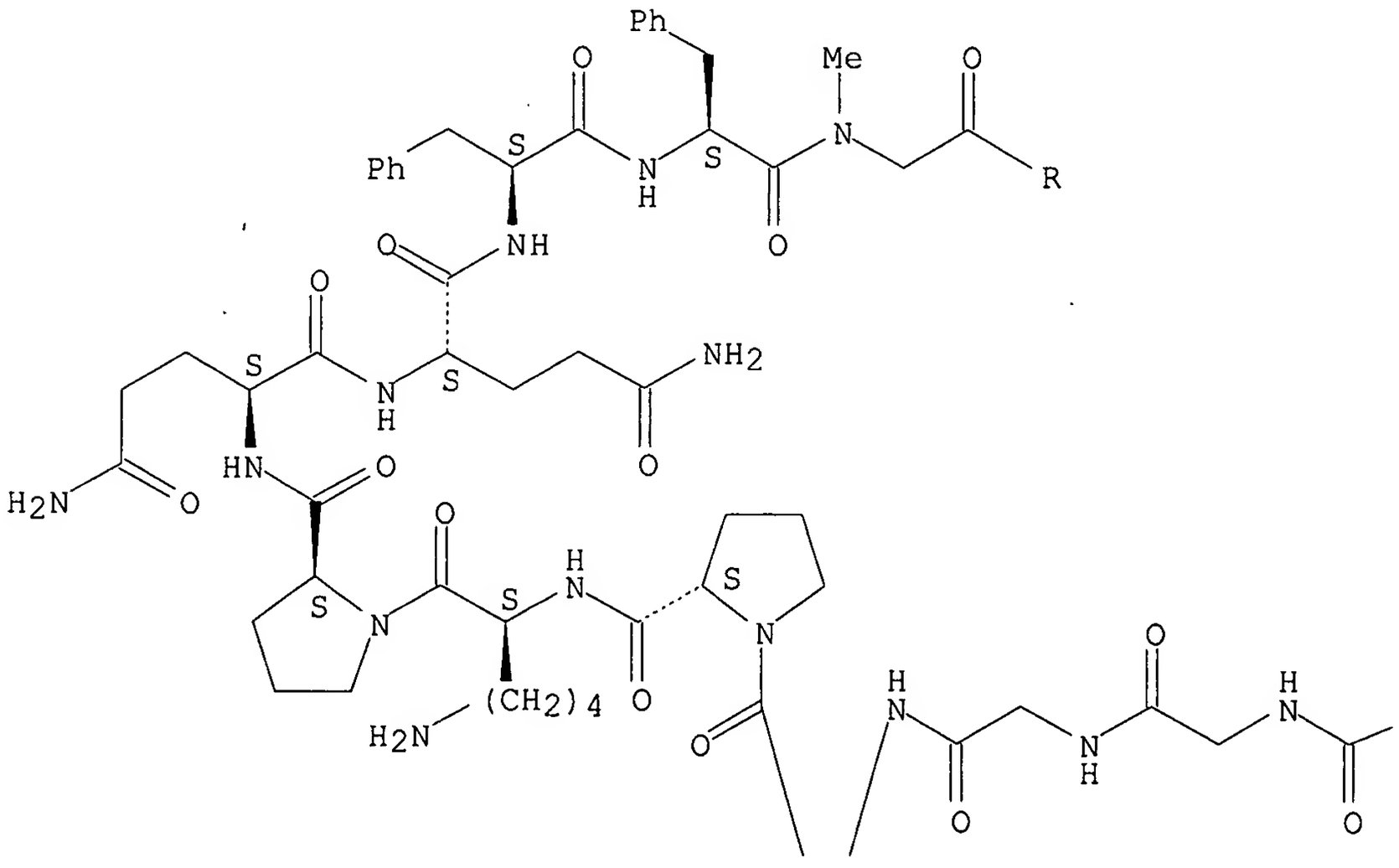
PATENT ANNOTATIONS (PNTE):

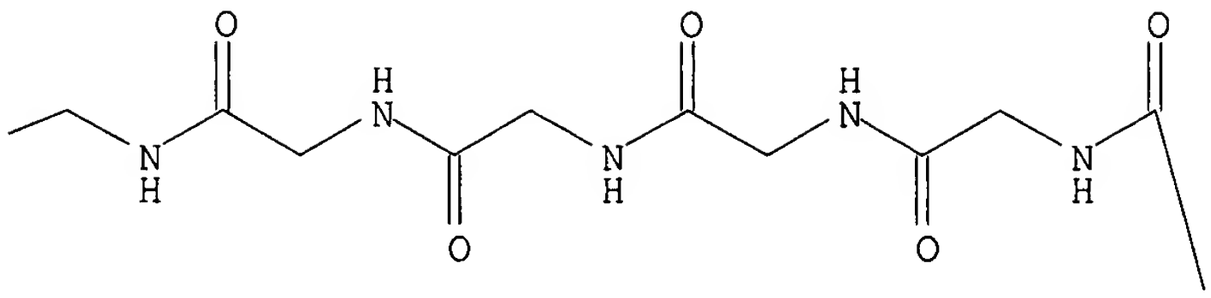
Sequence Source	Patent Reference
Not Given	US6063758 claimed SEQID 1
	US6063758 claimed PAGE 21

SEQ 1 GYGGGGGGGR PKPQQFFXC
MF C82 H120 N26 O24 S
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PRP (Properties); RACT (Reactant or reagent)
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); PRP (Properties); USES (Uses)

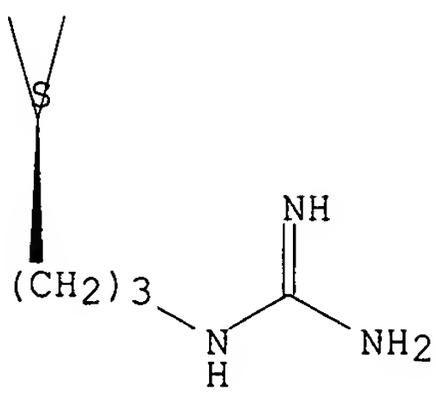
Absolute stereochemistry.

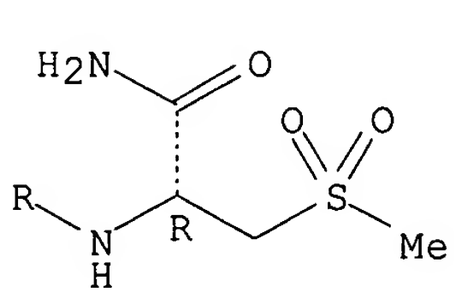
PAGE 1-A



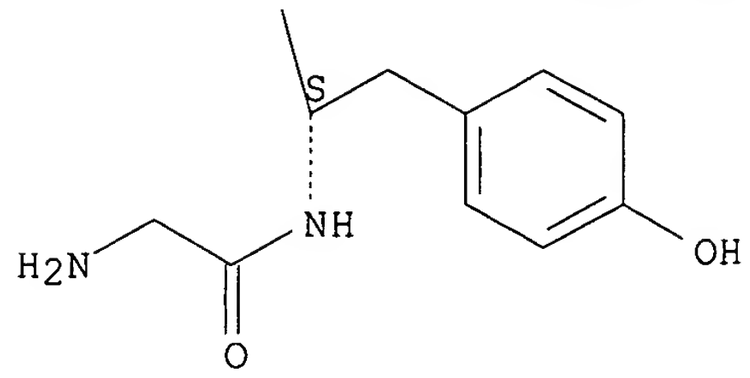


PAGE 2-A





PAGE 2-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

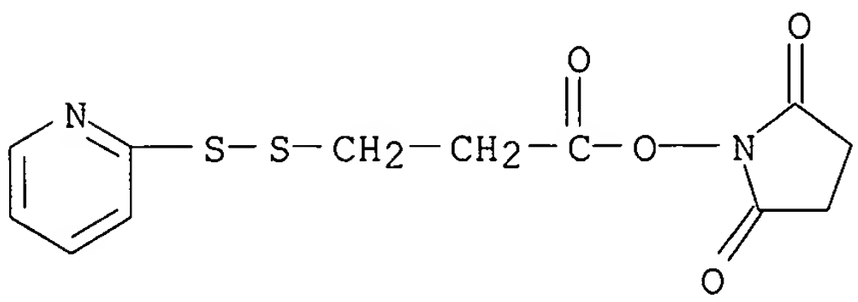
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2006 ACS on STN
RN **75037-46-6** REGISTRY
CN Gelonin (9CI) (CA INDEX NAME)
MF Unspecified
CI PMS, COM, MAN
PCT Manual registration
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOSIS, BIOTECHNO, CA, CAPLUS, CIN, CSCHEM, DDFU, DRUGU, EMBASE, MEDLINE, NAPRALERT, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
DT.CA CAplus document type: Conference; Dissertation; Journal; Patent
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)
RLD.P Roles for non-specific derivatives from patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)
RLD.NP Roles for non-specific derivatives from non-patents: BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); USES (Uses)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
466 REFERENCES IN FILE CA (1907 TO DATE)
166 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
467 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2006 ACS on STN
RN **68181-17-9** REGISTRY
CN 2,5-Pyrrolidinedione, 1-[1-oxo-3-(2-pyridinyldithio)propoxy]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 3-(2-Pyridyldithio)propionic acid N-hydroxysuccinimide ester
CN N-Hydroxysuccinimidyl 3-(2-pyridyldithio)propionate
CN N-Succinimidyl 3-(2-pyridyldithio)propionate
CN NSC 344485
CN NSC 677449
CN SPDP

CN Succinimidyl 3-[[(2-pyridyl)thio]thio]propionate
FS 3D CONCORD
MF C12 H12 N2 O4 S2
LC STN Files: AGRICOLA, BEILSTEIN*, BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, PROMT, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)
DT.CA CAplus document type: Conference; Dissertation; Journal; Patent
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); MSC (Miscellaneous); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)
RLD.P Roles for non-specific derivatives from patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

827 REFERENCES IN FILE CA (1907 TO DATE)
180 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
828 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2006 ACS on STN
RN **33507-63-0** REGISTRY
CN Substance P (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1: PN: US20020037833 SEQID: 1 unclaimed sequence
CN 21: PN: WO0181408 SEQID: 44 claimed protein
CN 2: PN: JP2005049164 SEQID: 2 claimed protein
CN 44: PN: WO2005016244 PAGE: 68 claimed protein
CN 690: PN: WO2004005342 PAGE: 46 claimed protein
CN L-Methioninamide, L-arginyl-L-prolyl-L-lysyl-L-prolyl-L-glutaminyl-L-glutaminyl-L-phenylalanyl-L-phenylalanylglycyl-L-leucyl-
CN Neurokinin P
CN Substance P (1-11)
CN Substance P (peptide)
CN Substance P (smooth-muscle stimulant)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 11
NTE modified

type	location	description
terminal mod.	Met-11	- C-terminal amide

PATENT ANNOTATIONS (PNTE):

Sequence Source	Patent Reference
Not Given	US2002037833
	unclaimed
	SEQID 1
	WO2001081408
	claimed
	SEQID 44

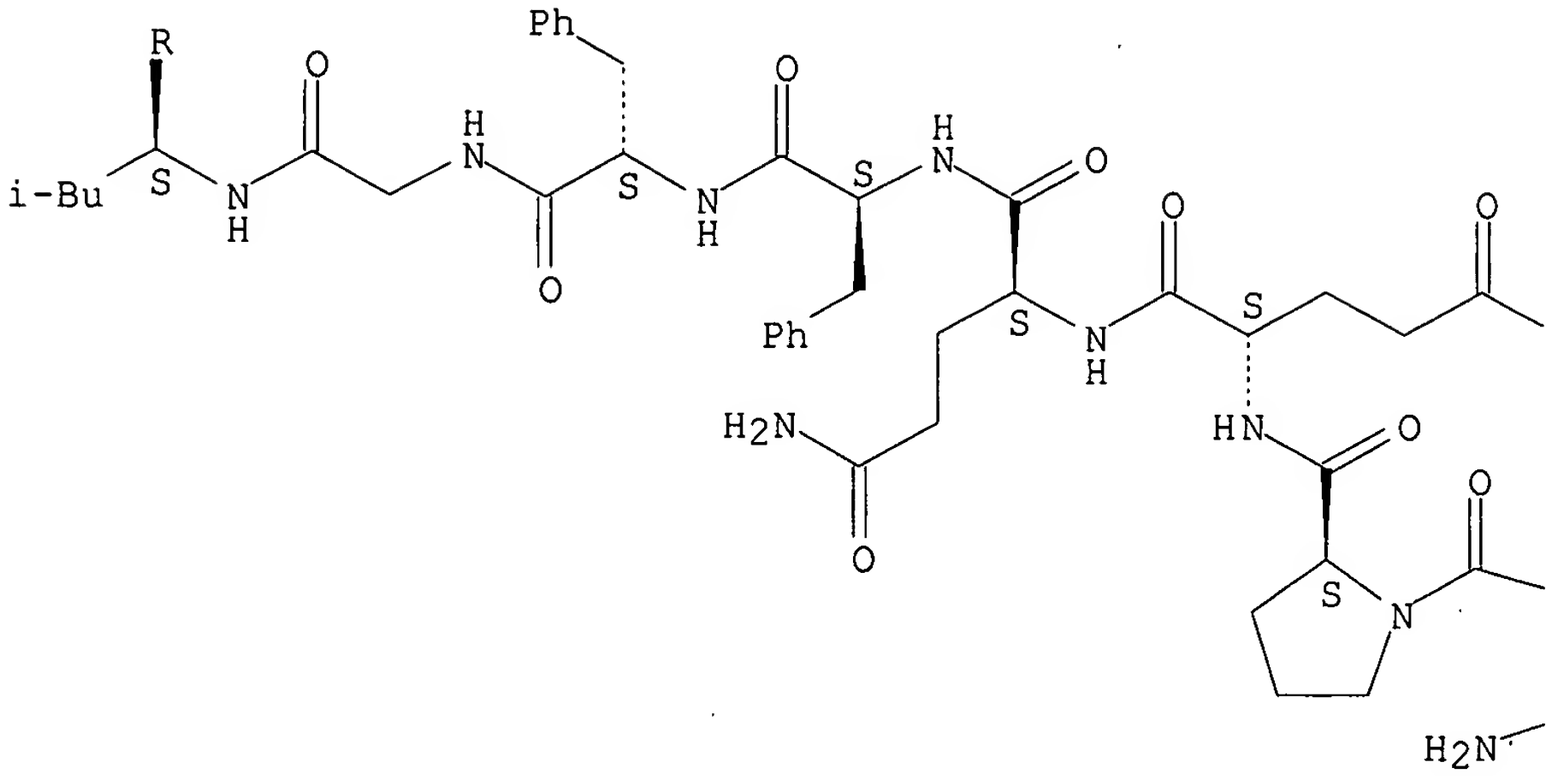
SEQ 1 RPKPQQFFGL M

RELATED SEQUENCES AVAILABLE WITH SEQLINK

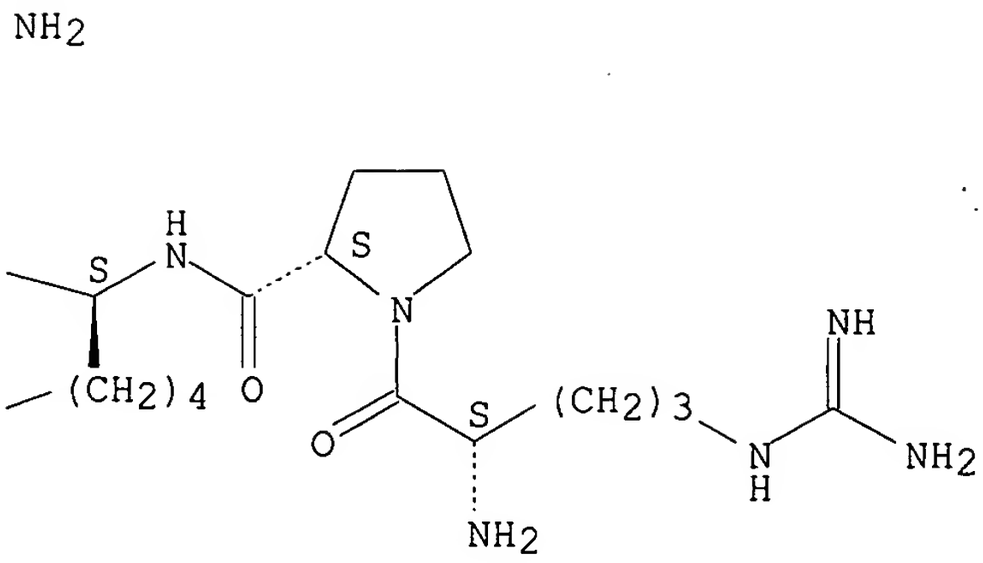
DR 12769-48-1, 11035-08-8
MF C63 H98 N18 O13 S
CI COM
LC STN Files: ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CABA, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)
DT.CA CAplus document type: Book; Conference; Dissertation; Journal; Patent; Report
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)
RLD.P Roles for non-specific derivatives from patents: ANST (Analytical study); BIOL (Biological study); MSC (Miscellaneous); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); CMBI (Combinatorial study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)
RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

Absolute stereochemistry.

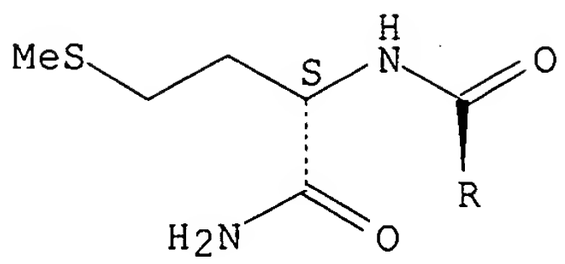
PAGE 1-A



PAGE 1-B



PAGE 2-A



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

14327 REFERENCES IN FILE CA (1907 TO DATE)
499 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
14341 REFERENCES IN FILE CAPLUS (1907 TO DATE)

ED FOR L10
L11 63 DUP REM L10 (71 DUPLICATES REMOVED)
ANSWERS '1-35' FROM FILE HCAPLUS
ANSWER '36' FROM FILE MEDLINE
ANSWERS '37-63' FROM FILE BIOSIS

=> d l11 ibib ab 1-63

L11 ANSWER 1 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2004:413971 HCAPLUS
DOCUMENT NUMBER: 141:138693
TITLE: **Immunotoxins** and neuropeptide-**toxin** conjugates experimental applications
AUTHOR(S): **Lappi, Dougles A.; Wiley, Ronald G.**
CORPORATE SOURCE: Advanced Targeting Systems, San Diego, CA, 92121, USA
SOURCE: Mini-Reviews in Medicinal Chemistry (2004), 4(5), 585-595
CODEN: MMCIAE; ISSN: 1389-5575
PUBLISHER: Bentham Science Publishers Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. The use of targeted **toxins** in research applications has recently grown considerably. The ability to remove a few specific cells, even when surrounded by different populations, has given scientists a powerful tool for the understanding of systems biol. The use of targeted **toxins** in research is rich and varied; here we limit ourselves to describe some of those exciting results that researchers have made in the neurosciences.
REFERENCE COUNT: 142 THERE ARE 142 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2003:646140 HCAPLUS
DOCUMENT NUMBER: 140:70024
TITLE: Targeted **toxins** in pain
AUTHOR(S): **Wiley, Ronald G.; Lappi, Douglas A.**
CORPORATE SOURCE: Departments of Neurology and Pharmacology, Laboratory of Experimental Neurology, Vanderbilt University, Nashville, TN, 37212, USA
SOURCE: Advanced Drug Delivery Reviews (2003), 55(8), 1043-1054
CODEN: ADDREP; ISSN: 0169-409X
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. Although only recently applied to the study of nociception, mol. neurosurgery, producing highly selective neural lesions using targeted **cytotoxins**, has proven a valuable tool for the anal. of nociceptive systems and promises to yield much more information on the role of specific types of neurons in pain perception and possibly new pain therapies. Neuropeptide-**toxin** conjugates, particularly, substance P-**saporin**, have proven useful research tools and may find clin. applications. Targeting nonlethal moieties (enzymes, genes, viruses) also may prove useful for research and therapeutic purposes.
REFERENCE COUNT: 96 THERE ARE 96 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 3 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3

ACCESSION NUMBER: 2003:605852 HCAPLUS
DOCUMENT NUMBER: 140:71367
TITLE: Destruction of Midbrain Dopaminergic Neurons by Using **Immunotoxin** to Dopamine Transporter
AUTHOR(S): **Wiley, R. G.**; Harrison, M. B.; Levey, A. I.; **Lappi, D. A.**
CORPORATE SOURCE: Departments of Neurology and Pharmacology and Center for Molecular Neuroscience, Vanderbilt University and VA TVHS, Nashville, TN, USA
SOURCE: Cellular and Molecular Neurobiology (2003), 23(4/5), 839-850
CODEN: CMNEDI; ISSN: 0272-4340
PUBLISHER: Kluwer Academic/Plenum Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The ability to target specific neurons can be used to produce selective neural lesions and potentially to deliver therapeutically useful moieties for treatment of disease. In the present study, the authors sought to determine if a monoclonal antibody to the dopamine transporter (anti-DAT) could be used to target midbrain dopaminergic neurons. The monoclonal antibody recognizes the second, large extracellular loop of DAT. The antibody was conjugated to the ribosome-inactivating protein **saporin**, and stereotactically pressure microinjected into either the center of the striatum or the left lateral ventricle of adult, male Sprague-Dawley rats. Local intrastriatal injections produced destruction of dopaminergic neurons in the ipsilateral substantia nigra consistent with suicide transport of the **immunotoxin**. Intraventricular injections (i.c.v.) produced significant loss of dopaminergic neurons in the substantia nigra and ventral tegmental area bilaterally without evident damage to any other aminergic structures, such as the locus coeruleus and raphe nuclei. To confirm the anat. findings, binding of [3H]mazindol to DAT in the striatum and midbrain was assessed using densitometric anal. of autoradiograms. Anti-DAT-**saporin** injected i.c.v. at a dose of 21 μg, but not 8 μg, produced highly significant decreases in mazindol binding consistent with loss of the dopaminergic neurons. These results show that anti-DAT can be used to target midbrain dopaminergic neurons and that anti-DAT-**saporin** may be useful for producing a lesion very similar to the naturally occurring neural degeneration seen in Parkinson's disease. Anti-DAT-**saporin** joins the growing list of neural lesioning agents based on targeted **cytotoxins**.

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 4 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4
ACCESSION NUMBER: 2000:317960 HCAPLUS
DOCUMENT NUMBER: 132:343339
TITLE: Substance P-**Saporin** (SP-SAP) conjugates for reducing pain perception, destroying NK-1 receptor-expressing cells, and treating a NK-1 receptor-associated disorder
INVENTOR(S): **Lappi, Douglas A.**; **Wiley, Ronald G.**
PATENT ASSIGNEE(S): Advanced Targeting Systems, Inc., USA
SOURCE: U.S., 21 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6063758	A	20000516	US 1997-890157	19970709
US 2004253248	A1	20041216	US 2004-813856	20040330
PRIORITY APPLN. INFO.:			US 1997-890157 A2	19970709
			US 2000-523790 A1	20000313

AB The invention provides a conjugate of Substance P (or an analog thereof) and **Saporin**. A method is provided for reducing the perception of pain by a subject comprising administering to the subject an ED of the pharmaceutical composition of the conjugate comprising Substance P (or substance P analog) and **Saporin**. Also provided is a method of selectively destroying NK-1 receptor-expressing cells in a subject comprising administering to the subject an ED of the conjugate of the invention. Further provided is a method for treating a NK-1 receptor-associated disorder in a subject which comprises administering to the subject an amount of the pharmaceutical composition comprising Substance P (or substance P analog) and **Saporin**, thereby treating the disorder associated with the NK-1 receptor.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 5
ACCESSION NUMBER: 2000:785168 HCAPLUS
DOCUMENT NUMBER: 134:616
TITLE: Entering through the doors of perception: characterization of a highly selective Substance P receptor-targeted **toxin**
AUTHOR(S): **Lappi, D. A.; Wiley, R. G.**
CORPORATE SOURCE: Advanced Targeting Systems, San Diego, CA, 92121, USA
SOURCE: Neuropeptides (Edinburgh) (2000), 34(5), 323-328
CODEN: NRPPDD; ISSN: 0143-4179
PUBLISHER: Harcourt Publishers Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review with 37 refs. Perception of external stimuli is often mediated through the activity of a G protein-coupled receptor in response to its ligand. Receptor-mediated internalization allows the insertion of **toxins** that cause the elimination of receptor-expressing neurons. Using this technique new information on systems biol. can be discovered and with this, new therapeutics developed.

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 6 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 6
ACCESSION NUMBER: 1999:746518 HCAPLUS
TITLE: Threshold relationship between lesion extent of the cholinergic basal forebrain in the rat and working memory impairment in the radial maze
AUTHOR(S): Wrenn, C. C.; **Lappi, D. A.; Wiley, R. G.**
CORPORATE SOURCE: Department of Pharmacology, Vanderbilt University, Nashville, TN, USA
SOURCE: Brain Research (1999), 847(2), 284-298
CODEN: BRREAP; ISSN: 0006-8993
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The cholinergic basal forebrain (CBF) degenerates in Alzheimer's Disease (AD), and the degree of this degeneration correlates with the degree of

dementia. In the present study we have modeled this degeneration in the rat by injecting various doses of the highly selective **immunotoxin** 192 IgG-**saporin** (192-sap) into the ventricular system. The ability of 192-sap-treated rats to perform in a previously learned radial maze working memory task was then tested. We report here that 192-sap created lesions of the CBF and, to a lesser extent, cerebellar Purkinje cells in a dose-dependent fashion. Furthermore, we found that rats harboring lesions of the entire CBF greater than 75% had impaired spatial working memory in the radial maze. Correlational anal. of working memory impairment and lesion extent of the component parts of the CBF revealed that high-grade lesions of the hippocampal-projecting neurons of the CBF were not sufficient to impair working memory. Only rats with high-grade lesions of the hippocampal and cortical projecting neurons of the CBF had impaired working memory. These data are consistent with other 192-sap reports that found behavioral deficits only with high-grade CBF lesions and indicate that the relationship between CBF lesion extent and working memory impairment is a threshold relationship in which a high degree of neuronal loss can be tolerated without detectable consequences. Addnl., the data suggest that the CBF modulates spatial working memory via its connections to both the hippocampus and cortex.

REFERENCE COUNT: 75 THERE ARE 75 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 7 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 7
ACCESSION NUMBER: 1999:762383 HCAPLUS
DOCUMENT NUMBER: 132:132707
TITLE: Targeting neurokinin-1 receptor-expressing neurons with [Sar9,Met(O2)11]substance P-**saporin**
AUTHOR(S): **Wiley, R. G.; Lappi, D. A.**
CORPORATE SOURCE: Neurology Service (127), VAMC, Nashville, TN, USA
SOURCE: Neuroscience Letters (1999), 277(1), 1-4
CODEN: NELED5; ISSN: 0304-3940
PUBLISHER: Elsevier Science Ireland Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Neurons expressing neurokinin-1 receptors (NK-1R) are selectively destroyed by substance P (SP) coupled to the ribosome inactivating protein, **saporin**. SP-**saporin** produces incomplete lesions of striatal NK-1R-expressing neurons even at doses that produce non-specific damage. In the present study, the authors sought to determine if the more stable, NK-1R-specific SP analog conjugated to **saporin**, [Sar9,Met(O2)11]-SP (SSP-**saporin**), would selectively destroy cells expressing NK-1R, in vitro and in vivo. The results show that SSP-**saporin** is highly effective and selective, producing extensive ablation of striatal NK-1R expressing interneurons at doses that do not cause loss of other striatal neurons suggesting advantages over SP-**saporin** as a selective lesioning agent. SSP-**saporin** will be useful in larger species and for intraparenchymal injections.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 8 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 8
ACCESSION NUMBER: 1998:466857 HCAPLUS
DOCUMENT NUMBER: 129:201595
TITLE: Selective lesion of the cholinergic basal forebrain causes a loss of cortical neuropeptide Y and somatostatin neurons
AUTHOR(S): Zhang, Zhang-Jin; **Lappi, Douglas A.**; Wrenn, Craige C.; Milner, Teresa A.; **Wiley, Ronald G.**

CORPORATE SOURCE: Neurology Service (127), Laboratory of Experimental Neurology, DVAMC, Nashville, TN, 37212-2637, USA
SOURCE: Brain Research (1998), 800(2), 198-206
CODEN: BRREAP; ISSN: 0006-8993
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Degeneration of the cholinergic basal forebrain (CBF) and changes in cortical neuropeptide levels have been reported in Alzheimer's disease. In the present study, we sought to determine if a selective cholinergic lesion of nucleus basalis magnocellularis (Nbm) could affect the number and distribution of neuropeptide Y (NPY) and somatostatin (SS) immunoreactive neurons in the frontoparietal and occipital cortices of rats. Brain sections were evaluated at survival times of 1, 2, 4, 8, 12, 24, 48, 78 and 100 wk after intraventricular injection of 192-**saporin**, an **immunotoxin** directed at the low affinity neurotrophin receptor (p75NGFr), that selectively destroys the CBF. Following the **immunotoxin** lesion of the Nbm, the number of NPY-labeled neurons decreased 33% in the frontoparietal cortex and 60% in the occipital cortex compared to age-matched normal controls at most survival time points. A significant loss of SS-labeled neurons in both cortical regions was seen 12 wk after 192-**saporin** injection with no further change up to 100-wk survival time. The effect of age on neuropeptidergic populations was evaluated in normal control rats. The number of NPY and SS immunoreactive neurons in aged rats (21-26 mo) decreased by 42% in the frontoparietal cortex and 27% in the occipital cortex when compared with young (3-6 mo) and middle-age (9-14 mo) rats. When both non-lesioned and lesioned animals with different ages were pooled for linear regression, a significant correlation was found between the number of cortical NPY- and SS-labeled neurons and cortical acetylcholinesterase (AChE) histochem. staining intensity. These findings indicate that: (1) cholinergic denervation of the Nbm is associated with an irreversible loss of neocortical NPY and SS immunoreactive neurons analogous to that observed in Alzheimer's disease and aging; (2) the degree of the loss of cortical NPY and SS immunoreactive neurons seems to be related to the extent of the reduction of cortical AChE intensity in both **toxin**-injected and normal aged rats. These findings may reflect a trophic dependence of NPY and SS neurons on cortical cholinergic input.

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 9 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 9
ACCESSION NUMBER: 1998:137285 HCAPLUS
DOCUMENT NUMBER: 128:267073
TITLE: Destruction of locus ceruleus neuronal perikarya after injection of anti-dopamine-B-hydroxylase **immunotoxin** into the olfactory bulb of the rat
AUTHOR(S): Blessing, W. W.; **Lappi, D. A.**; **Wiley, R. G.**
CORPORATE SOURCE: Centre for Neuroscience, Department of Physiology and Medicine, Flinders University Medical Centre, Bedford Park, Australia
SOURCE: Neuroscience Letters (1998), 243(1,2,3), 85-88
CODEN: NELED5; ISSN: 0304-3940
PUBLISHER: Elsevier Science Ireland Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB **Saporin**, a ribosome-inactivating protein, was coupled to a monoclonal antibody to dopamine-B-hydroxylase (DBH) and injected

unilaterally into the olfactory bulb of rats. After 4-13 days survival, the rat brain was processed histol. and the locus cerulei (LC) examined with Nissl and anti-DBH staining. There were degenerating dendrites in surviving LC neurons on the side ipsilateral to the **immunotoxin** -injected olfactory bulb. The number of Nissl-pos. LC neurons in a transverse section through the caudal one third of the LC was reduced from 116 to 50 neurons and the number of DBH-pos. neurons in the more rostral LC sections was reduced from 13 to 5. Our results indicate that it is possible to lesion LC neurons via retrograde intraaxonal transport of **saporin**-anti-DBH **immunotoxin** from the olfactory bulb.

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 10 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 10
ACCESSION NUMBER: 1997:664983 HCAPLUS
DOCUMENT NUMBER: 127:326853
TITLE: Inhibition of hyperalgesia by ablation of lamina I spinal neurons expressing the substance P receptor
AUTHOR(S): Mantyh, Patrick W.; Rogers, Scott D.; Honore, Prisca; Allen, Brian J.; Ghilardi, Joseph R.; Li, Jun; Daughters, Randy S.; **Lappi, Douglas A.**; **Wiley, Ronald G.**; Simone, Donald A.
CORPORATE SOURCE: Molecular Neurobiology Lab., Veterans Administration Medical Center, Minneapolis, MN, 55417, USA
SOURCE: Science (Washington, D. C.) (1997), 278(5336), 275-279
CODEN: SCIEAS; ISSN: 0036-8075
PUBLISHER: American Association for the Advancement of Science
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Substance P is released in the spinal cord in response to painful stimuli, but its role in nociceptive signaling remains unclear. When a conjugate of substance P and the ribosome-inactivating protein **saporin** was infused into the spinal cord, it was internalized and cytotoxic to lamina I spinal cord neurons that express the substance P receptor. This treatment left responses to mild noxious stimuli unchanged, but markedly attenuated responses to highly noxious stimuli and mech. and thermal hyperalgesia. Thus, lamina I spinal cord neurons that express the substance P receptor playa pivotal role in the transmission of highly noxious stimuli and the maintenance of hyperalgesia.

REFERENCE COUNT: 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 11 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 11
ACCESSION NUMBER: 1997:246788 HCAPLUS
DOCUMENT NUMBER: 126:312623
TITLE: Retrograde degeneration and colchicine protection of basal forebrain cholinergic neurons following hippocampal injections of an **immunotoxin** against the p75 nerve growth factor receptor
AUTHOR(S): Ohtake, T.; Heckers, S.; **Wiley, R.G.**; **Lappi, D.A.**; Mesulam, M.-M.; Geula, C.
CORPORATE SOURCE: Laboratory for Neurodegenerative and Aging Research, Department of Medicine, Harvard Medical School and Division of Geriatric Medicine, New England, Deaconess Hospital, Boston, MA, 02215, USA
SOURCE: Neuroscience (Oxford) (1997), 78(1), 123-133
CODEN: NRSCDN; ISSN: 0306-4522
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Intracerebroventricular injection of 192 IgG antibody against the P75LNGFR rat low affinity nerve growth factor receptor conjugated with **saporin**, a ribosome inactivating protein, has been shown to destroy the p75LNGFR-expressing cholinergic neurons of the basal forebrain. The authors injected this **immunotoxin** into the hippocampus and studied its retrograde effect upon the cholinergic neurons of the medial septum and the vertical limb of the diagonal band of Broca. Seven days after injection, there was a nearly total depletion of cholinergic axons within the hippocampus. This depletion was associated with a marked and significant decrease in the number of cholinergic neurons of the ipsilateral medial septum and the vertical limb of the diagonal band of Broca. At longer survival times, these changes were more pronounced. Parvalbumin-pos., GABAergic neurons within the same areas of the basal forebrain were not affected by **immunotoxin** injections. Injections of **saporin** alone had no effect upon cholinergic neurons. Simultaneous injection of colchicine with the **immunotoxin** resulted in a significant reduction of retrograde degeneration of cholinergic neurons and relative preservation of hippocampal cholinergic axons. These observations suggest that 192 IgG-**saporin** is transported retrogradely from the hippocampus to the cholinergic neurons in the medial septum and the vertical limb of the diagonal band of Broca and provide a model for retrograde degeneration of basal forebrain cholinergic neurons following cortically based toxic-pathol. processes.

L11 ANSWER 12 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 12
ACCESSION NUMBER: 1997:515572 HCAPLUS
DOCUMENT NUMBER: 127:186130
TITLE: Destruction of neurokinin-1 receptor expressing cells in vitro and in vivo using substance P-**saporin** in rats
AUTHOR(S): **Wiley, R. G.; Lappi, D. A.**
CORPORATE SOURCE: Neurology Service, VAMC, Nashville, TN, 37212-2637, USA
SOURCE: Neuroscience Letters (1997), 230(2), 97-100
CODEN: NELED5; ISSN: 0304-3940
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Substance P (SP) acts on neurons through the neurokinin-1 (NK-1) receptor. Conjugation of SP to the ribosome inactivating protein, **saporin** (SAP), produces a **cytotoxin** selective for cells that express the NK-1 receptor. SP-SAP cytotoxicity was inhibited by pre-treating the **toxin** to reduce the disulfide bond connecting SP to SAP or by pre-incubation with anti-SP antiserum or by SP analog showing that SP-SAP acts through binding of the SP moiety to NK-1 receptors. Injection of SP-SAP into the striatum selectively destroyed NK-1 receptor expressing interneurons. These results show that SP-SAP will be useful for studying the function of NK-1 receptor expressing neurons.

L11 ANSWER 13 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 13
ACCESSION NUMBER: 1996:647893 HCAPLUS
DOCUMENT NUMBER: 125:295012
TITLE: 192IgG-**saporin immunotoxin** and ibotenic acid lesions of nucleus basalis and medial septum produce comparable deficits on delayed nonmatching to position in rats
AUTHOR(S): Robinson, John K.; Wenk, Gary L.; **Wiley, Ronald**

G.; **Lappi, Douglas A.**; Crawley, Jacqueline N.
CORPORATE SOURCE: National Institute Mental Health, Bethesda, MD, USA
SOURCE: Psychobiology (Austin, Texas) (1996), 24(3), 179-186
CODEN: PSYBEC; ISSN: 0889-6313
PUBLISHER: Psychonomic Society Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The recently developed **immunotoxin**, 192IgG-**Saporin** (192-SAP), was compared with the standard **excitotoxin**, ibotenic acid, on two measures: (1) the extent of deficits on performance of a working memory task, delayed nonmatching-to-position (DNMTP), and (2) sensitivity to scopolamine on this task. Rats were extensively pretrained in an operant, spatial DNMTP memory task, then given combined site-specific lesions of the medial septum/diagonal band and nucleus basalis magnocellularis using either ibotenic acid (IBO) or low doses of the selective cholinergic **immunotoxin** 192-SAP. When compared with sham controls, both IBO and 192-SAP lesioned rats showed significant delay-independent redns. in DNMTP choice accuracy. Both 192-SAP and IBO lesioned rats showed increased sensitivity to a threshold dose of scopolamine, 0.15 mg/kg i.p., on DNMTP, as compared with sham-lesioned controls. When the rats were assessed at 18 wk post-lesioning, levels of choline acetyltransferase were depleted in the hippocampus in both IBO and 192-SAP lesioned groups. These findings suggest that 192-SAP, a cholinergically selective **neurotoxin**, is as effective as an **excitotoxin** when micro-injected into cholinergic cell bodies of the basal forebrain, producing deficits in behavioral tasks that persist for several weeks.

L11 ANSWER 14 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 14
ACCESSION NUMBER: 1996:678256 HCAPLUS
DOCUMENT NUMBER: 126:28741
TITLE: Central noradrenergic lesioning using anti-DBH-**saporin**: anatomical findings
AUTHOR(S): Wrenn, Craige C.; Picklo, Matthew J.; **Lappi, Douglas A.**; Robertson, David; **Wiley, Ronald G.**
CORPORATE SOURCE: Department of Pharmacology, Vanderbilt University, Nashville, TN, 37232, USA
SOURCE: Brain Research (1996), 740(1,2), 175-184
CODEN: BRREAP; ISSN: 0006-8993
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The ability to create lesions of discrete neuronal populations is an important strategy for clarifying the function of these populations. The power of this approach is critically dependent upon the selectivity of the exptl. lesioning technique. Anti-neuronal **immunotoxins** offer an efficient way to produce highly specific neural lesions. Two previous **immunotoxins** have been shown to be effective in both the CNS and PNS. They are OX7-**saporin**, which is targeted at Thy1, and 192-**saporin**, which is targeted at the low affinity neurotrophin receptor, p75NTR. In the present study, we sought to determine if an **immunotoxin** targeted at the neurotransmitter synthesizing enzyme, dopamine β-hydroxylase (DBH), could selectively destroy central noradrenergic neurons after intraventricular administration. This **immunotoxin**, which consists of a monoclonal antibody to DBH coupled by a disulfide bond to **saporin** (a ribosome inactivating protein), has been shown to be selectively toxic to peripheral

noradrenergic sympathetic neurons in rats after systemic injection. In the present study, immunohistochem. and Cresyl violet staining showed that the noradrenergic neurons of the locus coeruleus are destroyed bilaterally after intraventricular (i.c.v.) injection of 5, 10, and 20 μg of anti-DBH-**saporin** (α-DBH-sap) into rats. Complete bilateral lesioning of the A5 and A7 cell groups occurred at the two higher doses. Lesions of the A1/C1 and A2/C2/C3 cell groups were incomplete at all three doses. Dopaminergic neurons of the substantia nigra and ventral tegmental area and serotonergic neurons of the raphe, all monoaminergic neurons that do not express DBH, survived all α-DBH-sap doses. The cholinergic neurons of the basal forebrain, which are selectively killed by i.c.v. injection of 192-**saporin**, and cerebellar Purkinje cells which are killed by OX7-**saporin**, were not killed by α-DBH-sap. These results show that α-DBH-sap efficiently and selectively destroys CNS noradrenergic neurons after i.c.v. injection. The preferential destruction of locus coeruleus, A5, and A7 over A1/C1 and A2/C2/C3 may be due to more efficient access of the **immunotoxin** to these neurons and their terminals after i.c.v. injection.

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 15 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 15

ACCESSION NUMBER: 1995:959328 HCAPLUS
DOCUMENT NUMBER: 124:45543
TITLE: Anti-dopamine β-hydroxylase **immunotoxin** -induced sympathectomy in adult rats
AUTHOR(S): Picklo, Matthew J.; **Wiley, Ronald G.**; Lonce, Suzanna; **Lappi, Douglas A.**; Robertson, David
CORPORATE SOURCE: Dep. of Pharmacology, Vanderbilt Univ., Nashville, TN, USA
SOURCE: Journal of Pharmacology and Experimental Therapeutics (1995), 275(2), 1003-10
CODEN: JPETAB; ISSN: 0022-3565
PUBLISHER: Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Anti-dopamine β-hydroxylase **immunotoxin** (DHIT) is an anti-body-targeted noradrenergic lesioning tool comprised of a monoclonal antibody against the noradrenergic enzyme, dopamine β-hydroxylase, conjugated to **saporin**, a ribosome-inactivating protein. Noradrenergic-neuron specificity and completeness and functionality of sympathectomy were assessed. Adult, male Sprague-Dawley rats were given 28.5, 85.7, 142 or 285 μg/kg DHIT i.v. Three days after injection, a 6% to 73% decrease in the neurons was found in the superior cervical ganglia of the animals. No loss of sensory, nodose and dorsal root ganglia neurons was observed at the highest dose of DHIT. In contrast, the **immunotoxin**, 192-**saporin** (142 μg/kg), lesioned all three ganglia. To assess the sympathectomy, 2 wk after treatment (285 μg/kg), rats were anesthetized with urethane (1 g/kg) and cannulated in the femoral artery and vein. DHIT-treated animals' basal systolic blood pressure and heart rate were significantly lower than controls. Basal plasma norepinephrine levels were 41% lower in DHIT-treated animals than controls. Tyramine-stimulated release of norepinephrine in DHIT-treated rats was 27% of controls. Plasma epinephrine levels of DHIT animals were not reduced. DHIT-treated animals exhibited a 2-fold hypersensitivity to the α-adrenergic agonist phenylephrine. We conclude that DHIT selectively delivered **saporin** to noradrenergic neurons resulting in destruction of these neurons. Anti-dopamine β-hydroxylase

immunotoxin administration produces a rapid, irreversible sympathectomy.

L11 ANSWER 16 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 16
ACCESSION NUMBER: 1995:428567 HCAPLUS
DOCUMENT NUMBER: 122:180651
TITLE: 192 Immunoglobulin G-**saporin** produces graded behavioral and biochemical changes accompanying the loss of cholinergic neurons of the basal forebrain and cerebellar Purkinje cells
AUTHOR(S): Waite, J. J.; Chen, A. D.; Wardlow, M. L.; **Wiley, R. G.**; **Lappi, D. A.**; Thal, L. J.
CORPORATE SOURCE: Dep. Neurosciences, University California, San Diego, CA, 92093, USA
SOURCE: Neuroscience (Oxford) (1995), 65(2), 463-76
CODEN: NRSCDN; ISSN: 0306-4522
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Immunolesions of the cholinergic basal forebrain were produced in rats using various intraventricular doses of the **immunotoxin** 192 IgG-**saporin**: 0.34, 1.34, 2.0, 2.7 and 4.0 μg/rat. A battery of behavioral tests, chosen on the basis of reported sensitivity to conventional medial septal or nucleus basalis lesions, was administered. Dose-dependent impairments were found in acquisition, spatial acuity and working memory in the water maze. Dose-dependent hyperactivity in the open field and in swimming apeed was observed The highest dose group (4.0 μg) exhibited motoric disturbances which were particularly apparent in swimming and in clinging to an inclined screen. Response and habituation to acoustic startle were diminished in the three higher dose groups. Histol. results from acetylcholinesterase and low-affinity nerve growth factor receptor staining showed that the lesion was selective for cholinergic neurons bearing p75 nerve growth factor receptors in the basal forebrain nuclei. However, some Purkinje cells in the superficial layers of the cerebellum were also destroyed at the higher doses of **immunotoxin**. The activity of choline acetyltransferase, used as a marker of cholinergic deafferentation in regions innervated by the basal forebrain nuclei, was decreased with increasing doses to a plateau level of about 90% (average depletion) for the two highest dose groups. These two groups were the only ones to exhibit consistent and severe behavioral impairments on all behavioral tests performed. Thus, for a relatively selective cholinergic basal forebrain lesion, almost a 90% reduction in choline acetyltransferase activity is needed to produce substantial behavioral deficits. It appears that either a considerable safety factor exists or robust compensatory mechanisms can ameliorate behavioral deficits from a major, but incomplete loss of cholinergic basal forebrain innervation.

L11 ANSWER 17 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 17
ACCESSION NUMBER: 1995:417098 HCAPLUS
DOCUMENT NUMBER: 122:184643
TITLE: Destruction of the cholinergic basal forebrain using **immunotoxin** to rat NGF receptor: modeling the cholinergic degeneration of Alzheimer's disease
AUTHOR(S): **Wiley, R. G.**; Berbos, T. G.; Deckwerth, T. L.; Johnson, E. M., Jr.; **Lappi, D. A.**
CORPORATE SOURCE: Laboratory Experimental Neurology, Neurology Service (127), Nashville, TN, 37212-2637, USA
SOURCE: Journal of the Neurological Sciences (1995), 128(2),

157-66
CODEN: JNSCAG; ISSN: 0022-510X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Degeneration of cholinergic neurons in the basal forebrain (CBF) is a prominent neuropathol. feature of Alzheimer's disease and is thought responsible for some cognitive deficits seen in patients. An animal model of pure CBF degeneration would be valuable for anal. of the function of these neurons and testing therapeutic strategies. CBF neurons express receptors for nerve growth factor. To selectively destroy these neurons, the authors developed an **immunotoxin** using monoclonal antibody (192 IgG) to rat NGF receptor (p75NGFr) armed with the ribosome inactivating protein, **saporin**. In vitro 192-**saporin** was highly toxic to neurons expressing p75NGFr. Intraventricular injections of 192-**saporin** destroyed the CBF and impaired passive avoidance learning. These results indicate that 192-**saporin** treated rats can be used to model a key feature of Alzheimer's disease and that anti-neuronal **immunotoxins** are a powerful approach to selective neural lesioning.

L11 ANSWER 18 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 18
ACCESSION NUMBER: 1994:500454 HCAPLUS
DOCUMENT NUMBER: 121:100454
TITLE: Differential effects of spatial navigation of **immunotoxin**-induced cholinergic lesions of the medial septal area and nucleus basalis magnocellularis
AUTHOR(S): Berger-Sweeney, Joanne; Heckers, Stephan; Mesulam, Marek-Marsel; **Wiley, Ronald G.**; **Lappi, Douglas A.**; Sharma, Maitreyi
CORPORATE SOURCE: Dep. Biological Sciences, Wellesley Coll., Wellesley, MA, 02181, USA
SOURCE: Journal of Neuroscience (1994), 14(7), 4507-19
CODEN: JNRSDS; ISSN: 0270-6474
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The effects of anatomy and behavior of a ribosomal inactivating protein (**saporin**) coupled to a monoclonal antibody against the low-affinity NGF receptor (NGFr) were examined In adult rats, NGFr is expressed predominantly in cholinergic neurons of the medial septal area (MSA), diagonal band nuclei, and nucleus basalis magnocellularis (nBM), but also in noncholinergic cerebellar Purkinje cells. Rats with **immunotoxin** injections to the MSA, nBM, and lateral ventricle were compared to controls on a spatial and cued reference memory task in the Morris maze. **Toxin** injections to the MSA slightly impaired the initial, but not asymptotic, phase of spatial navigation. Injections to the nBM impaired all phases of spatial navigation. Cued navigation, however, was not affected in either the MSA or nBM group. The ventricular injections severely affected spatial and cued navigation. Acetylcholinesterase (AChE) histochem. and NGFr and choline acetyltransferase immunohistochem. revealed a loss of almost all NGFr-pos. cholinergic neurons in the MSA and AChE fibers in hippocampus (MSA group); almost all NGFr neurons in the nBM, some in the MSA, most AChE fibers in neocortex and some in the hippocampus (NBM group); and almost all NGFr neurons in the MSA and nBM and their corresponding hippocampal and cortical AChE fibers (ventricular group). Cholinergic nBM projections to the amygdala were largely preserved in all groups. The amount of cholinergic fiber loss in the cortex correlated modestly, but significantly, with the severity of impairment of the asymptotic phase of performance of the spatial task. An unambiguous interpretation of the

anatomical locus of behavioral deficits was not possible because of damage to cholinergic striatal interneurons (nBM group) and to noncholinergic cerebellar Purkinje cells (ventricular group). These data suggest that the cholinergic cortical system is critical to the performance of this spatial memory task. Cholinergic denervation of the hippocampus alone, however, is not sufficient to impair markedly performance of this task.

L11 ANSWER 19 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 19
ACCESSION NUMBER: 1994:209439 HCAPLUS
DOCUMENT NUMBER: 120:209439
TITLE: Complete and selective cholinergic denervation of rat neocortex and hippocampus but not amygdala by an **immunotoxin** against the p75 NGF receptor
AUTHOR(S): Heckers, Stephan; Ohtake, Toshiyuki; **Wiley, Ronald G.**; **Lappi, Douglas A.**; Geula, Changiz; Mesulam, Marek Marsel
CORPORATE SOURCE: Dep. Neurol., Beth Israel Hosp., Boston, MA, 02215, USA
SOURCE: Journal of Neuroscience (1994), 14(3, Pt. 1), 1271-89
CODEN: JNRSDS; ISSN: 0270-6474
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The **immunotoxin** 192 IgG-**saporin**, produced by coupling the ribosome-inactivating protein **saporin** to the monoclonal 192 IgG antibody against the low-affinity p75 NGF receptor (NGFr), was injected into the cerebral ventricle, septal area, and substantia innominata of adult rats. Injections into the cerebral ventricle induced a complete loss of NGFr-pos. basal forebrain neurons and their axons. Extensive loss of cholinergic neurons was found in the septum, diagonal band, and magnocellular preoptic nucleus but not in the nucleus basalis-substantia innominata complex, where many cholinergic, presumably NGFr-neg., neurons remained intact. Cholinergic fibers were completely lost in the neocortex and hippocampus, showed some preservation in allocortical areas, and showed only minor loss in the amygdala. The NGFr-pos. cholinergic basal forebrain neurons progressively degenerated during the first 5 days and did not recover after 180 days. The effect of intraventricular (i.c.v.) 192 IgG-**saporin** injections on NGFr-pos. basal forebrain neurons could be blocked by simultaneous i.c.v. injection of colchicine. Intraparenchymal injections into the septal area or substantia innominata damaged cholinergic neurons mainly around the injection sites and reduced their resp. cortical and hippocampal projections. Noncholinergic septal neurons containing parvalbumin and noncholinergic neurons containing calbindin-D28K or NADPH diaphorase, which were adjacent to cholinergic nucleus basalis-substantia innominata neurons, were not affected by 192 IgG-**saporin**. The choline acetyltransferase immunoreactivity in cortical interneurons, habenula, and brainstem was unchanged. Dopaminergic and noradrenergic cortical afferents remained intact. 192 IgG-**saporin** damaged 2 neuronal groups outside the basal forebrain that express the p75 NgF receptor: NGFr-pos. cerebellar Purkinje cells after i.c.v. and cholinergic striatal interneurons after injections into the substantia innominata. Apparently, the **immunotoxin** 192 IgG-**saporin** induces a complete and selective lesion of NGFr-pos. cholinergic basal forebrain neurons projecting to hippocampus and neocortex.

L11 ANSWER 20 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 20
ACCESSION NUMBER: 1994:698769 HCAPLUS
DOCUMENT NUMBER: 121:298769
TITLE: Cortical cholinergic deafferentation following the

intracortical infusion of 192 IgG-**saporin**: a quantitative histochemical study
AUTHOR(S): Holley, Lee Ann; **Wiley, Ronald G.**; **Lappi, Douglas A.**; Sarter, Martin
CORPORATE SOURCE: Department of Psychology and Neuroscience Program, The Ohio State University, 27 Townshend Hall, Columbus, OH, 43210, USA
SOURCE: Brain Research (1994), 663(2), 277-86
CODEN: BRREAP; ISSN: 0006-8993
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The **immunotoxin** 192 IgG-**saporin** has been hypothesized to selectively lesion cholinergic neurons that bear the low-affinity p75 nerve growth factor (NGF) receptor. To evaluate the usefulness of this **toxin** in studies intended to determine the functions of cholinergic afferents of cortical areas, relatively small concns. and vols. of the **immunotoxin** (0.01-0.05 μg/0.5-1.0 μl) were infused into cortical areas of one hemisphere of rats, while the vehicle was infused into homologous areas of the contralateral hemisphere. The effects of these infusions on the d. of cortical acetylcholinesterase (AChE)-pos. fibers and of normal fibers (as revealed by a reduced silver stain) were quantified. The infusion of the **immunotoxin** did not produce local gliosis in excess of the gliosis resulting from the infusion of vehicle. When compared with the frontoparietal cortex of the intact hemisphere, the number of cortical AChE-pos. fibers was reduced by 36-39% and the d. of the silver-stained fibers was decreased by 20-25%. While the loss of AChE-pos. fibers and silver-stained fibers correlated significantly in layers V/VI, a linear regression anal. suggested that the magnitude of the loss of AChE-pos. fibers was greater than would be predicted on the basis of the residual d. of normal fibers. Thus, the data suggest that infusions of 192 IgG-**saporin** into the cortex did not result in the loss of non-cholinergic afferents. Intracortical infusions of relatively small concns. and vols. of 192 IgG-**saporin** appear to provide a useful approach for the examination of the functions of cholinergic inputs to specific cortical regions.

L11 ANSWER 21 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 21
ACCESSION NUMBER: 1995:252815 HCAPLUS
DOCUMENT NUMBER: 122:23969
TITLE: Noradrenergic lesioning with an anti-dopamine β-hydroxylase **immunotoxin**
AUTHOR(S): Picklo, Matthew J.; **Wiley, Ronald G.**; **Lappi, Douglas A.**; Robertson, David
CORPORATE SOURCE: Department of Pharmacology, Vanderbilt University, Nashville, TN, 37232, USA
SOURCE: Brain Research (1994), 666(2), 195-200
CODEN: BRREAP; ISSN: 0006-8993
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Sympathectomy has been achieved by a variety of methods but each has its limitations. These include lack of tissue specificity, incomplete lesioning, and the age range of susceptibility to the lesioning. To circumvent these drawbacks, an **immunotoxin** was constructed using a monoclonal antibody against the noradrenergic specific enzyme dopamine β-hydroxylase (DβH) coupled via a disulfide bond to **saporin**, a ribosomal inactivating protein. Three days after i.v. injection of the anti-DβH **immunotoxin** (50 μg) into adult

Sprague-Dawley rats, 66% of neurons in the superior cervical ganglia were chromatolytic. Superior cervical ganglia neurons were poisoned in 1 day old and 1 wk old (86% of neurons) neonatal rats following s.c. injection of 3.75 and 15 μg, resp. The anti-DβH **immunotoxin** will be a useful tool in the study of the peripheral noradrenergic system in adult and neonatal animals.

L11 ANSWER 22 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 22
ACCESSION NUMBER: 1994:480115 HCAPLUS
DOCUMENT NUMBER: 121:80115
TITLE: Time course of cholinergic and monoaminergic changes in rat brain after immunolesioning with 192 IgG-**saporin**
AUTHOR(S): Waite, Jerene J.; Wardlow, Mark L.; Chen, Andrew C.; **Lappi, Douglas A.; Wiley, Ronald G.;** Thal, Leon J.
CORPORATE SOURCE: Dep. Neurosciences, Univ. California, San Diego, CA, 92093, USA
SOURCE: Neuroscience Letters (1994), 169(1-2), 154-8
CODEN: NELED5; ISSN: 0304-3940
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 192 IgG-**saporin**, an **immunotoxin** targeted at the low affinity NGF receptor, was infused into the lateral ventricle of rat brain. Three days and one week post lesion, choline acetyltransferase activity was markedly decreased in cortex, hippocampus, olfactory bulbs, and septum (brain regions innervated by the cholinergic neurons of the basal forebrain) with no change in cerebellum, striatum or pons. Measurement of monoamine levels revealed increases in HVA, DOPAC and dopamine, primarily in the olfactory bulbs at the 28-day time point only, suggesting a compensation for cholinergic inactivity. High levels of basal forebrain cholinergic lesioning can be obtained with this **immunotoxin** with minimal or no effects on monoaminergic or other cholinergic systems.

L11 ANSWER 23 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 23
ACCESSION NUMBER: 1995:204691 HCAPLUS
DOCUMENT NUMBER: 122:1776
TITLE: Behavioral, histochemical and biochemical consequences of selective immunolesions in discrete regions of the basal forebrain cholinergic system
AUTHOR(S): Torres, E. M.; Perry, T. A.; Blokland, A.; Wilkinson, L. S.; **Wiley, R. G.; Lappi, D. A.;** Dunnett, S. B.
CORPORATE SOURCE: Dep. of Experimental Psychology, Univ. of Cambridge, Cambridge, CB2 3EB, UK
SOURCE: Neuroscience (Oxford) (1994), 63(1), 95-122
CODEN: NRSCDN; ISSN: 0306-4522
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The effectiveness of a recently developed **immunotoxin**, 192 IgG-**saporin**, was evaluated for making selective lesions of subgroups of basal forebrain cholinergic neurons. Following a pilot series of injections into the nucleus basalis magnocellularis to establish the ED for intraparenchymal lesions, sep. groups of rats received injections of the **immunotoxin** into the septum, into the diagonal band of Broca or into the nucleus basalis magnocellularis. The lesions produced extensive and effective loss of cholinergic neurons in the discrete areas

of the basal forebrain, as identified by loss of cells staining for acetylcholinesterase and p75NGFr, with a parallel loss of acetylcholinesterase staining and choline acetyltransferase activity in the target areas associated with each injection site in the dorsolateral neocortex, cingulate cortex and hippocampus. The selectivity of the lesion for cholinergic neurons was supported by the lack of gliosis and sparing of small to medium-sized cells at the site of injection of the **toxin**, including the glutamate decarboxylase immunoreactive cells that contribute to the septohippocampal projection. In spite of the extensive disturbance in the cholinergic innervation of the neocortex and hippocampus, **immunotoxin** lesions produced no detectable deficit in the Morris water maze task in any of the lesion sites within the basal forebrain. By contrast small but significant deficits were seen on tests of nocturnal activity (septal and nucleus basalis magnocellularis lesions), open field activity (septal and diagonal band lesions), passive avoidance (nucleus basalis magnocellularis lesions) and delayed non-matching to position (septal lesions). The results indicate that the 192 IgG-**saporin** provides a powerful tool for making effective lesions of the basal forebrain cholinergic neurons, and that the behavioral sequelae of such lesions warrant further detailed investigation.

L11 ANSWER 24 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 25
ACCESSION NUMBER: 1991:671550 HCAPLUS
DOCUMENT NUMBER: 115:271550
TITLE: Immunolesioning: selective destruction of neurons using **immunotoxin** to rat NGF receptor
AUTHOR(S): **Wiley, Ronald G.**; Oeltmann, Thomas N.; **Lappi, Douglas A.**
CORPORATE SOURCE: Neurol. Serv., DVAMC, Nashville, TN, 37212-2637, USA
SOURCE: Brain Research (1991), 562(1), 149-53
CODEN: BRREAP; ISSN: 0006-8993
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The 192 IgG, a monoclonal antibody to the rat nerve growth factor (NGF) receptor, was disulfide-coupled to **saporin**, a ribosome-inactivating protein. Systemic injection of 192 IgG-**saporin** destroyed sympathetic postganglionic neurons and some sensory neurons. Injection of 192 IgG-**saporin** into the lateral ventricle destroyed cholinergic neurons of the basal forebrain. These results show that antineuronal **immunotoxins** are a powerful approach that may prove useful in a variety of neurobiol. applications.

L11 ANSWER 25 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:441104 HCAPLUS
DOCUMENT NUMBER: 143:128240
TITLE: Molecular Neurosurgery with Targeted **Toxins**
AUTHOR(S): **Wiley, Ronald G.**; **Lappi, Douglas A.**; Editors
CORPORATE SOURCE: USA
SOURCE: (2005) Publisher: (Humana Press Inc.: Totowa, N. J.), 311 pp.
ISBN: 1-58829-199-5
DOCUMENT TYPE: Book
LANGUAGE: English
AB Unavailable

L11 ANSWER 26 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:397787 HCAPLUS

DOCUMENT NUMBER: 143:473702
TITLE: B fragment of cholera **toxin** conjugated to **saporin**
AUTHOR(S): Ohara, Peter T.; Kelley, Kanwarjit; Jasmin, Luc
CORPORATE SOURCE: Departments of Anatomy and the W. M. Keck Foundation Centre for Integrative Neuroscience and Neurological Surgery, University of California, San Francisco, CA, USA
SOURCE: Molecular Neurosurgery with Targeted Toxins (2005), 293-306. Editor(s): **Wiley, Ronald G.**; **Lappi, Douglas A.** Humana Press Inc.: Totowa, N. J. CODEN: 69GVHZ; ISBN: 1-58829-199-5
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review on the B fragment of cholera **toxin** conjugated to **saporin**. A conjugate of the B fragment of cholera **toxin** and **saporin** was employed to target myelin-producing cells (oligoendrocytes) in the central nervous system. It was found that CTB-sap is effective in removing oligodendrocytes in addition to other glial cells and largely leaves neurons intact. CTB-sap was also used to study demyelination and remyelination in the spinal cord, and results obtained suggest that CTB-sap will be useful for inducing demyelinating lesions in other parts of the CNS.
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 27 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:397786 HCAPLUS
DOCUMENT NUMBER: 143:343802
TITLE: Isolectin IB4-mediated cytotoxic targeting of sensory neurons
AUTHOR(S): Vulchanova, Lucy; Honda, Christopher N.
CORPORATE SOURCE: Department of Veterinary PathoBiology, University of Minnesota, St. Paul, MN, USA
SOURCE: Molecular Neurosurgery with Targeted Toxins (2005), 265-291. Editor(s): **Wiley, Ronald G.**; **Lappi, Douglas A.** Humana Press Inc.: Totowa, N. J. CODEN: 69GVHZ; ISBN: 1-58829-199-5
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review describes the application of isolectin from Bandaireae simplicifolia and **saporin** (IB4-sap) in pain studies.
REFERENCE COUNT: 63 THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 28 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:397785 HCAPLUS
DOCUMENT NUMBER: 143:473701
TITLE: The use of **saporin** conjugates to dissect neurons responsible for sleep and wakefulness
AUTHOR(S): Blanco-Centurion, Carlos; Gerashchenko, Dmitry; Murillo-Rodriguez, Eric; Desarnaud, Frank; Shiromani, Priyattam J.
CORPORATE SOURCE: Department of Neurology, Harvard Medical School and Veterans Administration Medical Center, West Roxbury, MA, USA
SOURCE: Molecular Neurosurgery with Targeted Toxins (2005), 249-264. Editor(s): **Wiley, Ronald G.**; **Lappi, Douglas A.** Humana Press Inc.: Totowa, N. J.

CODEN: 69GVHZ; ISBN: 1-58829-199-5
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review. **Saporin**-based **neurotoxins** were applied to lesion specific neuronal phenotypes and thereby create a circuit model of sleep generation. In particular, a new **saporin** conjugate, hypocretin 2-**saporin**, to lesion HCRT/OX (orexin) receptor-containing neurons. When this conjugate is applied to the lateral hypothalamus, the HCRT/OX neurons are lesioned, and rats demonstrate narcoleptic-like behavior.
REFERENCE COUNT: 70 THERE ARE 70 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 29 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:397784 HCAPLUS
DOCUMENT NUMBER: 143:472175
TITLE: **Saporin** conjugates and pain
AUTHOR(S): **Wiley, Ronald G.; Lappi, Douglas A.**
CORPORATE SOURCE: Departments of Neurology and Pharmacology, Veterans Affairs Tennessee Valley Healthcare System, Vanderbilt University School of Medicine and Neurology Service, Nashville, TN, USA
SOURCE: Molecular Neurosurgery with Targeted Toxins (2005), 235-248. Editor(s): **Wiley, Ronald G.; Lappi, Douglas A.** Humana Press Inc.: Totowa, N. J.
CODEN: 69GVHZ; ISBN: 1-58829-199-5
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review. Several **saporin**-containing targeted **toxins** have been used in studies of nociception/pain. Certainly, substance P-**saporin** (SP-sap), the first conjugate used for pain research, has generated the most data and interest, but a number of other **saporin** conjugates have been introduced, and others are on the way. The attenuation of nociception, hyperalgesia, and allodynia with intrathecal SP-sap and [Sar9,Met(O2)11]-SP-sap suggests these agents have clin. potential for treating chronic, intractable pain.
REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 30 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:397783 HCAPLUS
DOCUMENT NUMBER: 143:472662
TITLE: Chemical dissection of brain glucoregulatory circuitry
AUTHOR(S): Ritter, Sue; Dinh, Thu T.; Bugarith, Kishor; Salter, Dawna M.
CORPORATE SOURCE: Programs in Neuroscience, Washington State University, Pullman, WA, USA
SOURCE: Molecular Neurosurgery with Targeted Toxins (2005), 181-218. Editor(s): **Wiley, Ronald G.; Lappi, Douglas A.** Humana Press Inc.: Totowa, N. J.
CODEN: 69GVHZ; ISBN: 1-58829-199-5
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review. The use of **immunotoxin**, anti-dopamine-β-hydrolase (antiDβH) conjugated to **saporin** (anti-DβH sap) in demonstrating the essential roles of hindbrain catecholamine neurons in glucoregulation is described. Based on the results obtained, the norepinephrine (NE) and epinephrine (E) neurons lesioned by anti-DβH-sap injections are not required for daily basal feeding,

corticosterone secretion, adrenal medullary function, or estrous cycling since these basal functions do not appear to be impaired in the anti-DβH-sap-lesioned rats. Nevertheless, these NE and E neurons are capable of commandeering the essential circuitry for behavioral, neuroendocrine, and autonomic responses and powerfully activating them when glucose homeostasis is threatened.

REFERENCE COUNT: 93 THERE ARE 93 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 31 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:397781 HCAPLUS
DOCUMENT NUMBER: 143:472661
TITLE: Exploring the role of acetylcholine in primate cognition using Me20.4 IgG-**saporin**
AUTHOR(S): Ridley, Rosalind M.; Baker, Harry F.
CORPORATE SOURCE: Department of Experimental Psychology, School of Veterinary Medicine, Cambridge, UK
SOURCE: Molecular Neurosurgery with Targeted Toxins (2005), 101-142. Editor(s): **Wiley, Ronald G.; Lappi, Douglas A.** Humana Press Inc.: Totowa, N. J. CODEN: 69GVHZ; ISBN: 1-58829-199-5
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review discusses the anatomy of the cholinergic system in old world and new world primates and the cholinergic **immunotoxins** in primates. The cognitive testing in primates and the role of basal forebrain acetylcholine are discussed.
REFERENCE COUNT: 129 THERE ARE 129 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 32 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:397780 HCAPLUS
DOCUMENT NUMBER: 143:473766
TITLE: 192 IgG-**saporin**-induced partial cortical cholinergic deafferentation as a model for determining the interactions between brain aging and neurodevelopmental defects in the cortical cholinergic input system
AUTHOR(S): Sarter, Martin; Bruno, John P.
CORPORATE SOURCE: Department of Psychology, University of Michigan, Ann Arbor, MI, USA
SOURCE: Molecular Neurosurgery with Targeted Toxins (2005), 87-100. Editor(s): **Wiley, Ronald G.; Lappi, Douglas A.** Humana Press Inc.: Totowa, N. J. CODEN: 69GVHZ; ISBN: 1-58829-199-5
DOCUMENT TYPE: Conference
LANGUAGE: English
AB Longitudinal studies assessing the interactions between aging and pre-existing abnormalities in the integrity or regulation of relevant neuronal system are rare despite their obvious heuristic power, and despite their irreplaceable role for testing ontogenetic theories about brain aging. The use of the **immunotoxin** to assess the long-term and age-related consequences of early limitations in the integrity of the cortical cholinergic input system represents an obviously crude and early approach that will have to be replaced by more subtle and more valid manipulations of the development and maturation of the cortical cholinergic input system, such as, for example, the early-life disruption of its trophic factor support. The data generated by expts. that assessed

the age-related neuronal and behavioral/cognitive consequences of 192 IgG-sap-induced partial cortical cholinergic deafferentation demonstrated that aging results in a dramatic dysregulation of the residual neuronal system. The alternative to approaches that focus on the examination of such interactions between early abnormalities in the regulation of neuronal systems that mediate crucial aspects of cognitive functions and aging would be to conceptualize pathol. brain aging as primarily driven by major neuropathol. events that manifest abruptly at higher ages. However, the available data increasingly do not support such a view.

REFERENCE COUNT: 84 THERE ARE 84 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 33 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:397779 HCAPLUS
DOCUMENT NUMBER: 143:343801
TITLE: Basal forebrain cholinergic lesion by 192 IgG-**saporin**: a tool to assess the consequences of cortical cholinergic dysfunction in Alzheimer's disease
AUTHOR(S): Schliebs, Reinhard
CORPORATE SOURCE: Department of Neurochemistry, Paul Flechsig Institute for Brain Research, University of Leipzig, Leipzig, Germany
SOURCE: Molecular Neurosurgery with Targeted Toxins (2005), 59-86. Editor(s): **Wiley, Ronald G.; Lappi, Douglas A.** Humana Press Inc.: Totowa, N. J. CODEN: 69GVHZ; ISBN: 1-58829-199-5
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review. A review on the usefulness of 192 IgG-sap as a powerful tool for producing an animal model with selective and specific basal forebrain cholinergic lesions in rats that can be applied to mimic basal forebrain cholinergic system-associated sequelae of Alzheimer's disease, including changes in noncholinergic cortical neurotransmission, processing of the APP, and inflammation, as well as glucose metabolism This animal approach should also be particularly valuable for elaboration and testing of therapeutic strategies designed to compensate for the reduced cortical cholinergic input.
REFERENCE COUNT: 154 THERE ARE 154 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 34 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:397778 HCAPLUS
DOCUMENT NUMBER: 143:343800
TITLE: Biochemical, physiological, and behavioral characterization of the cholinergic basal forebrain lesion produced by 192 IgG-**saporin**
AUTHOR(S): Waite, Jerene J.
CORPORATE SOURCE: Veteran's Medical Research Foundation, University of California, San Diego, San Diego, CA, USA
SOURCE: Molecular Neurosurgery with Targeted Toxins (2005), 31-58. Editor(s): **Wiley, Ronald G.; Lappi, Douglas A.** Humana Press Inc.: Totowa, N. J. CODEN: 69GVHZ; ISBN: 1-58829-199-5
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review. A review describes the development of use, behavioral studies, and physiol. studies of the cholinergic basal forebrain lesion by 192 IgG-

saporin.
REFERENCE COUNT: 93 THERE ARE 93 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 35 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:397777 HCAPLUS
DOCUMENT NUMBER: 143:473700
TITLE: Ribosome-inactivating proteins
AUTHOR(S): Stirpe, Fiorenzo
CORPORATE SOURCE: Dipartimento di Patologia Sperimentale, Universita di Bologna, Bologna, Italy
SOURCE: Molecular Neurosurgery with Targeted Toxins (2005), 9-29. Editor(s): **Wiley, Ronald G.; Lappi, Douglas A.** Humana Press Inc.: Totowa, N. J. CODEN: 69GVHZ; ISBN: 1-58829-199-5
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review on the ribosome-inactivating proteins. Ribosome-inactivating proteins (RIPs) from plants are described. The known RIPs are divided into type 1, consisting of a single chain with enzymic properties, and type 2, consisting of an enzymic A chain linked to B chain with the properties of a lectin specific for sugar with the galactose structure. Some type 2 RIPs are potent **toxins**, ricin being the best known, whereas others are much less toxic. All RIPs damage irreversibly ribosomes, by removing an adenine residue from rRNA, and depurinate also other nucleic acids. The distribution in nature, the mechanism of action, the toxicity and the main biol. properties of RIPs are described, as well and their use as components of conjugates with antibodies and other carriers are mentioned.
REFERENCE COUNT: 100 THERE ARE 100 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 36 OF 63 MEDLINE on STN DUPLICATE 24
ACCESSION NUMBER: 93129757 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1482757
TITLE: Spatial learning impairments in rats with selective immunolesion of the forebrain cholinergic system.
AUTHOR: Nilsson O G; Leanza G; Rosenblad C; **Lappi D A; Wiley R G;** Bjorklund A
CORPORATE SOURCE: Department of Medical Cell Research, University of Lund, Sweden.
SOURCE: Neuroreport, (1992 Nov) Vol. 3, No. 11, pp. 1005-8. Journal code: 9100935. ISSN: 0959-4965.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Space Life Sciences
ENTRY MONTH: 199302
ENTRY DATE: Entered STN: 26 Feb 1993
Last Updated on STN: 6 Feb 1998
Entered Medline: 16 Feb 1993
AB A monoclonal antibody to the low-affinity NGF receptor, 192 IgG, coupled to a **cytotoxin, saporin**, was recently introduced as an efficient selective **neurotoxin** for the NGFr-bearing cholinergic neurones in the rat basal forebrain. In the present study we report that an intracerebroventricular injection of this 192 IgG-**saporin** conjugate induces a severe, long-lasting spatial learning impairment, as assessed in the Morris water-maze task. This behavioural impairment was

associated with 65-90% depletion of choline acetyltransferase activity (ChAT) in the hippocampus and cortex. ChAT activity associated with other cholinergic neurone systems in the brain (striatum, mesencephalon, spinal cord), was left virtually unaffected. This new **immunotoxin** holds great promise as a tool for selective and efficient lesions of the forebrain cholinergic system in functional and behavioural studies.

L11 ANSWER 37 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2003:282977 BIOSIS
DOCUMENT NUMBER: PREV200300282977
TITLE: ENHANCED MORPHINE ANALGEISA AFTER SPINAL DERMORPHIN - **SAPORIN**.
AUTHOR(S): Miller, S. A. [Reprint Author]; **Lappi, D. A.**; **Wiley, R. G.**
CORPORATE SOURCE: Dept of Neurosci, Vanderbilt Univ, Nashville, TN, USA
SOURCE: Society for Neuroscience Abstract Viewer and Itinerary Planner, (2002) Vol. 2002, pp. Abstract No. 218.10. http://sfn.scholarone.com. cd-rom. Meeting Info.: 32nd Annual Meeting of the Society for Neuroscience. Orlando, Florida, USA. November 02-07, 2002. Society for Neuroscience.
DOCUMENT TYPE: Conference; (Meeting) Conference; (Meeting Poster) Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 19 Jun 2003 Last Updated on STN: 19 Jun 2003

AB Dermorphin-**saporin** (derm-sap) is a neuropeptide **toxin** conjugate which is selective for neurons expressing the mu-opiate receptor (MOR). The dermorphin moiety of the conjugate binds MOR which is then internalized by the neuron, carrying the **toxin** with it. The saproin moiety inactivates ribosomes resulting in cell death. In the present study we sought to determine the effect of destroying MOR expressing neurons in Lamina II of the spinal cord dorsal horn on baseline thermal pain sensitivity and response to systemic morphine analgesia. 456 ng derm-sap (n=8) and vehicle (n=8) were injected into the lumbar CSF of adult male Sprague Dawley rats using a subarachnoid catheter inserted through the atlanto-occipital membrane and passed cadually to the level of the lumbar enlargement. 10 minutes following **toxin** injection, the catheters were withdrawn and the animals allowed to recover. When tested on a hotplate at 52C and on tail-flick assay, **toxin** rats did not differ from rats injected with vehicle. However, the dose-response curves for subcutaneous morphine were significantly shifted to the left (increased potency) in the **toxin** treated rats when compared with vehicle controls. Histological analysis of multiple dorsal root ganglia failed to reveal evidence of any primary afferent cell loss. We interpreted these findings to indicate that the neurons destroyed by derm-sap are lamina II MOR expressing neurons and play a role in morphine analgesia at high stimulus intensities.

L11 ANSWER 38 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2001:497953 BIOSIS
DOCUMENT NUMBER: PREV200100497953
TITLE: Dose-dependent effects of intrathecal substance P-**saporin** and SSP-**saporin**.
AUTHOR(S): **Wiley, R. G.** [Reprint author]; Kline, R. H., IV [Reprint author]; **Lappi, D. A.**

CORPORATE SOURCE: Neurol Serv 127, VA Med Ctr and Vanderbilt U., Nashville, TN, USA
SOURCE: Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 737. print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience. San Diego, California, USA. November 10-15, 2001.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 24 Oct 2001
Last Updated on STN: 23 Feb 2002

AB Selective destruction of lamina I dorsal horn neurons expressing the neurokinin-1 receptor (NK-1R) can attenuate responses to capsaicin injection and thermal hyperalgesia/mechanical allodynia in models of inflammatory, persistent or neuropathic pain. In the present study, we sought to determine the relationships between spinal intrathecal dose of substance P-**saporin** or the related **toxin**, SPP-**saporin**, the loss of NK-1R neurons and reduction of phase II formalin responses. Rats were injected intrathecally with 10 ul of either vehicle, 175 ng, 350 ng or 700 ng of SP-sap. Others were injected with either vehicle, 25 ng, 50 ng or 100 ng of SPP-sap. After 2 weeks, nocifensive behavior was scored for 90 min after a unilateral hindpaw injection of dilute formaldehyde. The amount of phase II nocifensive behavior from 20-90 min post injection was totaled for each animal. Rats were sacrificed and transverse lumbosacral spinal cord sections were stained for NK-1R using indirect immunoperoxidase technique. Digital micrographs of the superficial dorsal horn were captured and the number of pixels in the darkest intensity values were expressed as percent of the analysis area for each dorsal horn. Significant correlations were noted for dose vs dark pixel percentage and for dark pixel percentage vs phase II formalin behavior. The greater the **toxin** dose the greater the loss of NK-1R staining and the greater the attenuation of phase II formalin behavior. These results indicate that the **toxin** effects on pain behavior are proportional to the degree of loss of lamina I NK-1R expressing neurons.

L11 ANSWER 39 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2000:221636 BIOSIS
DOCUMENT NUMBER: PREV200000221636
TITLE: Lumbar intrathecal dermorphin-**saporin**, a **toxin** selective for mu opiate receptor (MOR) expressing neurons, prevents morphine effect on C fiber-mediated nociception in rats.
AUTHOR(S): Miller, Scott A. [Reprint author]; **Lappi, Douglas A.**; **Wiley, Ronald G.**
CORPORATE SOURCE: Nashville, TN, USA
SOURCE: Neurology, (April 11, 2000) Vol. 54, No. 7 Supp. 3, pp. A177. print.
Meeting Info.: 52nd Annual Meeting of the American Academy of Neurology. San Diego, CA, USA. April 29-May 06, 2000.
CODEN: NEURAI. ISSN: 0028-3878.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 31 May 2000
Last Updated on STN: 5 Jan 2002

L11 ANSWER 40 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2000:221635 BIOSIS
DOCUMENT NUMBER: PREV200000221635
TITLE: Selective destruction of CNS noradrenergic neurons using **immunotoxin** to dopamine beta-hydroxylase: Effects on pain perception in rats.
AUTHOR(S): Iqbal, M. A. [Reprint author]; **Lappi, D. A.**; Kline, R. H.; **Wiley, R. G.**
CORPORATE SOURCE: Nashville, TN, USA
SOURCE: Neurology, (April 11, 2000) Vol. 54, No. 7 Supp. 3, pp. A176-A177. print.
Meeting Info.: 52nd Annual Meeting of the American Academy of Neurology. San Diego, CA, USA. April 29-May 06, 2000.
CODEN: NEURAI. ISSN: 0028-3878.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 31 May 2000
Last Updated on STN: 5 Jan 2002

L11 ANSWER 41 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2001:87984 BIOSIS
DOCUMENT NUMBER: PREV200100087984
TITLE: Intrathecal dermorphin-**saporin** decreases morphine effect in hotplate algesia testing.
AUTHOR(S): Miller, S. A. [Reprint author]; **Lappi, D. A.**; **Wiley, R. G.**
CORPORATE SOURCE: Vanderbilt U., Nashville, TN, USA
SOURCE: Society for Neuroscience Abstracts, (2000) Vol. 26, No. 1-2, pp. Abstract No.-212.8. print.
Meeting Info.: 30th Annual Meeting of the Society of Neuroscience. New Orleans, LA, USA. November 04-09, 2000.
Society for Neuroscience.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 14 Feb 2001
Last Updated on STN: 12 Feb 2002
AB The targeted **cytotoxin**, dermorphin-**saporin**, selectively destroys cells expressing MOR. In the present study, we gave dermorphin-**saporin** by lumbar i.t. injection and sought to determine if destroying dorsal horn neurons expressing MOR would alter thermal sensitivity and/or response to systemic morphine (MS) using hotplate testing under various conditions. 16 male Sprague-Dawley rats were tested on constant temperature (0.3, 44 and 47 C) and incremental (0.1 C/sec from 28 to 57 C) hotplates. Then 8 rats received lumbar intrathecal injections of derm-sap (465 ng) and 8 received vehicle using a subarachnoid PE-10 catheter that was removed 10 mins after injection. Retesting rats after **toxin**/vehicle injection showed no change in responses to any of the hotplate conditions. However, vehicle but not derm-sap rats showed increased lick latency on the incremental hotplate 20 mins after MS, 2.5 mg/kg, s.c. At 5 mg/kg of MS, vehicle and dermorphin-**saporin** rats showed identical responses. Capsaicin cream (0.94%) applied to the plantar surface of both hindpaws 3 hrs before testing on the 44 C hotplate produced decreased lick latencies in both groups of

rats. MS, 5 mg/kg, s.c., produced increased lick latencies in capsaicin treated vehicle but not derm-sap rats. At 10 mg/kg, MS produced identical effects in capsaicin treated vehicle and **toxin** rats. These results indicate that i.t. derm-sap produced no change in baseline thermal sensitivity but did diminish the effect of low dose MS under conditions that preferentially test C nociceptor function suggesting that MOR-expressing dorsal horn neurons play a role in the analgesic action of low dose MS.

L11 ANSWER 42 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2001:77052 BIOSIS
DOCUMENT NUMBER: PREV200100077052
TITLE: Altered operant and reflex responses to noxious heat in rats with central noradrenergic lesions using antiDbetaH-**saporin**.
AUTHOR(S): Vierck, C. J. [Reprint author]; Belford, P. M.; Iqbal, M. A.; Camara, C.; Kline, R. H.; **Lappi, D. A.**; **Wiley, R. G.**
CORPORATE SOURCE: Univ Florida, Gainesville, FL, USA
SOURCE: Society for Neuroscience Abstracts, (2000) Vol. 26, No. 1-2, pp. Abstract No.-247.10. print.
Meeting Info.: 30th Annual Meeting of the Society of Neuroscience. New Orleans, LA, USA. November 04-09, 2000. Society for Neuroscience.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 7 Feb 2001
Last Updated on STN: 12 Feb 2002

AB We sought to determine effects of a selective lesion of pontine NA neurons on thermal sensitivity, using an operant escape task and hotplate tests. 8 rats received ICV injections of 10 ig of anti-DbetaH-**saporin**, an **immunotoxin** that selectively destroys NA neurons, or vehicle. The rats were trained to escape a dark chamber with a hot floor to a brightly lit room-temperature shelf. There was no difference between groups at 39o, 44oor 47o C. However, at 44o C, application of mustard oil to the dorsal surface of both hindpaws or 0.94% capsaicin cream to the plantar surfaces increased escape durations only for vehicle rats. Also, at 44o C, **toxin**-treated rats were more sensitive than vehicle rats to morphine (0.5-5 mg/kg, s.c.) and clonidine (0.125 mg/kg, s.c.). The **toxin**-injected rats were insensitive to yohimbine (2.5 and 5 mg/kg, s.c.). Postmortem analysis for DbetaH showed that **toxin** -treated rats lost all pontine NA neurons, with preservation of medullary NA cells. To determine the role of NA projections to the spinal cord, two groups of rats were injected with 200-300 ng of antiDbetaH-**saporin** or vehicle via a lumbar intrathecal catheter. There were no consistent changes in baseline responses, and no differences between **toxin** and vehicle injected rats to 44o C after capsaicin or morphine (2.5 mg/kg, s.c.). However, the **toxin** treated rats were more sensitive to clonidine (0.03 mg/kg, s.c.). Thus, spinally projecting NA neurons appear not to mediate some modulatory effects of pontine NA neurons on nociception.

L11 ANSWER 43 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2000:146458 BIOSIS
DOCUMENT NUMBER: PREV200000146458

TITLE: Selective immunolesion of substance P receptor expressing interneurons in the hippocampus.
AUTHOR(S): Borhegyi, Zs. [Reprint author]; **Wiley, R. G.**; **Lappi, D. A.**; Morrell, J. [Reprint author]; Buzsaki, G. [Reprint author]
CORPORATE SOURCE: Center for Molecular and Behavioral Neuroscience, Rutgers the State University of New Jersey, Newark, NJ, 07102, USA
SOURCE: Society for Neuroscience Abstracts, (1999) Vol. 25, No. 1-2, pp. 1393. print.
Meeting Info.: 29th Annual Meeting of the Society for Neuroscience. Miami Beach, Florida, USA. October 23-28, 1999. Society for Neuroscience.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 19 Apr 2000
Last Updated on STN: 4 Jan 2002

L11 ANSWER 44 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2000:146431 BIOSIS
DOCUMENT NUMBER: PREV200000146431
TITLE: Lack of effect of intraventricular OX7-**saporin** on working memory in the rat.
AUTHOR(S): Wrenn, C. C. [Reprint author]; **Lappi, D. A.**; **Wiley, R. G.**
CORPORATE SOURCE: Department of Pharmacology, Vanderbilt Univ., Nashville, TN, USA
SOURCE: Society for Neuroscience Abstracts, (1999) Vol. 25, No. 1-2, pp. 1388. print.
Meeting Info.: 29th Annual Meeting of the Society for Neuroscience. Miami Beach, Florida, USA. October 23-28, 1999. Society for Neuroscience.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 19 Apr 2000
Last Updated on STN: 4 Jan 2002

L11 ANSWER 45 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2000:143322 BIOSIS
DOCUMENT NUMBER: PREV200000143322
TITLE: Inhibition of mustard oil-induced thermal hyperalgesia in an operant escape task by substance P-**saporin**.
AUTHOR(S): **Wiley, R. G.** [Reprint author]; **Lappi, D. A.**; Vierck, C. J.
CORPORATE SOURCE: Neuroscience Department, University of Florida Brain Institute, Gainesville, FL, 32611, USA
SOURCE: Society for Neuroscience Abstracts, (1999) Vol. 25, No. 1-2, pp. 679. print.
Meeting Info.: 29th Annual Meeting of the Society for Neuroscience. Miami Beach, Florida, USA. October 23-28, 1999. Society for Neuroscience.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)

LANGUAGE: English
ENTRY DATE: Entered STN: 19 Apr 2000
Last Updated on STN: 4 Jan 2002

L11 ANSWER 46 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1999:68906 BIOSIS
DOCUMENT NUMBER: PREV199900068906
TITLE: Dermorphin-SAP: A **toxin** targeted at neurons expressing the mu opiate receptor.
AUTHOR(S): **Wiley, R. G.** [Reprint author]; **Lappi, D. A.**
CORPORATE SOURCE: VAMC, Nashville, TN 37212, USA
SOURCE: Society for Neuroscience Abstracts, (1998) Vol. 24, No. 1-2, pp. 853. print.
Meeting Info.: 28th Annual Meeting of the Society for Neuroscience, Part 1. Los Angeles, California, USA. November 7-12, 1998. Society for Neuroscience.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 16 Feb 1999
Last Updated on STN: 16 Feb 1999

L11 ANSWER 47 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1997:531309 BIOSIS
DOCUMENT NUMBER: PREV199799830512
TITLE: SSP-SAP, an improved **neurotoxin** selective for neurons expressing the neurokinin-1 receptor: Anatomic and pain perception effects of striatal and lumbar intrathecal injections.
AUTHOR(S): **Wiley, R. G.** [Reprint author]; **Lappi, D. A.**
CORPORATE SOURCE: Vanderbilt Univ., VAMC, Nashville, TN 37212-2637, USA
SOURCE: Society for Neuroscience Abstracts, (1997) Vol. 23, No. 1-2, pp. 1804.
Meeting Info.: 27th Annual Meeting of the Society for Neuroscience. New Orleans, Louisiana, USA. October 25-30, 1997.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 12 Dec 1997
Last Updated on STN: 27 Jan 1998

L11 ANSWER 48 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1997:531305 BIOSIS
DOCUMENT NUMBER: PREV199799830508
TITLE: Spinal injection of substance P - **saporin** **toxin** is cytotoxic to lamina I neurons that express the substance P receptor and profoundly attenuates thermal and mechanical hyperalgesia.
AUTHOR(S): Honore, P. [Reprint author]; Rogers, S. D.; Allen, B. J.;

Li, J.; Daughters, R.; Ghilardi, J. R.; **Wiley, R. G.**; **Lappi, D. A.**; Vigna, S. R.; Simone, D. A.; Mantyh, P. W.
CORPORATE SOURCE: Mol. Neurol. Lab., VAMC, Minneapolis, MN 55417, USA
SOURCE: Society for Neuroscience Abstracts, (1997) Vol. 23, No. 1-2, pp. 1803.
Meeting Info.: 27th Annual Meeting of the Society for Neuroscience. New Orleans, Louisiana, USA. October 25-30, 1997.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 12 Dec 1997
Last Updated on STN: 12 Dec 1997

L11 ANSWER 49 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1997:531306 BIOSIS
DOCUMENT NUMBER: PREV199799830509
TITLE: Internalization and cytotoxicity of a substance P - **saporin** chemical conjugate in spinal cord neurons in vitro and in vivo: Using ligand induced receptor endocytosis as a specific portal of entry into cells.
AUTHOR(S): Rogers, S. D. [Reprint author]; Allen, B. J.; Honore, P.; Ghilardi, J. R.; **Wiley, R. G.**; **Lappi, D. A.**; Vigna, S. R.; Simone, D. A.; Maletta, G.; Mantyh, P. W.
CORPORATE SOURCE: Mol. Neuro. Lab., VAMC, Minneapolis, MN 55417, USA
SOURCE: Society for Neuroscience Abstracts, (1997) Vol. 23, No. 1-2, pp. 1803.
Meeting Info.: 27th Annual Meeting of the Society for Neuroscience. New Orleans, Louisiana, USA. October 25-30, 1997.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 12 Dec 1997
Last Updated on STN: 12 Dec 1997

L11 ANSWER 50 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1997:530120 BIOSIS
DOCUMENT NUMBER: PREV199799829323
TITLE: The behavioral effects of **immunotoxin** induced cholinergic basal forebrain lesions: A dose response study.
AUTHOR(S): Wrenn, C. C.; **Lappi, D. A.**; **Wiley, R. G.**
CORPORATE SOURCE: Dep. Pharmacol., Vanderbilt Univ., Nashville, TN 37232, USA
SOURCE: Society for Neuroscience Abstracts, (1997) Vol. 23, No. 1-2, pp. 1601.
Meeting Info.: 27th Annual Meeting of the Society for Neuroscience. New Orleans, Louisiana, USA. October 25-30, 1997.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)

Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 12 Dec 1997
Last Updated on STN: 12 Dec 1997

L11 ANSWER 51 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1997:528781 BIOSIS
DOCUMENT NUMBER: PREV199799827984
TITLE: Destruction of midbrain dopaminergic neurons using **immunotoxin** to the dopamine transporter: Behavior, receptor binding and anatomy.
AUTHOR(S): **Lappi, D. A.** [Reprint author]; Harrison, M. B.; Price, R. D.; Levey, A. I.; **Wiley, R. G.**
CORPORATE SOURCE: Advanced Targeting Systems, San Diego, CA, USA
SOURCE: Society for Neuroscience Abstracts, (1997) Vol. 23, No. 1-2, pp. 1372.
Meeting Info.: 27th Annual Meeting of the Society for Neuroscience. New Orleans, Louisiana, USA. October 25-30, 1997.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 12 Dec 1997
Last Updated on STN: 12 Dec 1997

L11 ANSWER 52 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1996:548560 BIOSIS
DOCUMENT NUMBER: PREV199699270916
TITLE: Lesioning of medullary noradrenergic and adrenergic neurons using the **immunotoxin** Anti-DBH-**saporin**.
AUTHOR(S): Wrenn, C. C.; Picklo, M. J.; **Lappi, D. A.**; Robertson, D.; **Wiley, R. G.**
CORPORATE SOURCE: Dep. Pharmacology, Vanderbilt Univ., Nashville, TN 37232, USA
SOURCE: Society for Neuroscience Abstracts, (1996) Vol. 22, No. 1-3, pp. 1918.
Meeting Info.: 26th Annual Meeting of the Society for Neuroscience. Washington, D.C., USA. November 16-21, 1996.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 13 Dec 1996
Last Updated on STN: 23 Jan 1997

L11 ANSWER 53 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1996:547475 BIOSIS
DOCUMENT NUMBER: PREV199699269831
TITLE: Destruction of midbrain dopaminergic neurons using **immunotoxin** to the dopamine transporter.
AUTHOR(S): **Wiley, R. G.** [Reprint author]; Brown, J.; Levey, A. I.; **Lappi, D. A.**
CORPORATE SOURCE: Lab. Exp. Neurol., VAMC, Nashville, TN 37212, USA

SOURCE: Society for Neuroscience Abstracts, (1996) Vol. 22, No. 1-3, pp. 1732.
Meeting Info.: 26th Annual Meeting of the Society for Neuroscience. Washington, D.C., USA. November 16-21, 1996.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 13 Dec 1996
Last Updated on STN: 13 Dec 1996

L11 ANSWER 54 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1994:511856 BIOSIS
DOCUMENT NUMBER: PREV199497524856
TITLE: Adult and neonatal sympathectomy with anti-DBH **immunotoxin**.
AUTHOR(S): Picklo, M. J. [Reprint author]; Amlicke, J. D.; **Wiley, R. G.**; **Lappi, D. A.**; Roden, D. M.; Robertson, D.
CORPORATE SOURCE: Dep. Pharmacol., Vanderbilt Univ., Nashville, TN 37232, USA
SOURCE: Society for Neuroscience Abstracts, (1994) Vol. 20, No. 1-2, pp. 1367.
Meeting Info.: 24th Annual Meeting of the Society for Neuroscience. Miami Beach, Florida, USA. November 13-18, 1994.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 3 Dec 1994
Last Updated on STN: 3 Dec 1994

L11 ANSWER 55 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1994:510967 BIOSIS
DOCUMENT NUMBER: PREV199497523967
TITLE: Behavioral and anatomical effects of 192-**saporin** and anti-d beta-H-**saporin**: Passive avoidance, conditioned freezing and open field activity.
AUTHOR(S): **Wiley, R. G.** [Reprint author]; Berbos, T. G.; **Lappi, D. A.**; Picklo, M. J.; Robertson, D.
CORPORATE SOURCE: VAMC Vanderbilt Univ., Nashville, TN 37212, USA
SOURCE: Society for Neuroscience Abstracts, (1994) Vol. 20, No. 1-2, pp. 1214.
Meeting Info.: 24th Annual Meeting of the Society for Neuroscience. Miami Beach, Florida, USA. November 13-18, 1994.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 3 Dec 1994
Last Updated on STN: 3 Dec 1994

L11 ANSWER 56 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on

STN
ACCESSION NUMBER: 1994:470916 BIOSIS
DOCUMENT NUMBER: PREV199497483916
TITLE: Comparison of 192 IgG-**saporin immunotoxin** (192-SAP) versus ibotenic acid (IBO) lesions of nucleus basalis and medial septum: Comparison deficits in delayed nonmatching-to-sample (DNMTS) performance in rats.
AUTHOR(S): Robinson, J. K. [Reprint author]; **Wiley, R. G.**; **Lappi, D. A.**; Crawley, J. N.
CORPORATE SOURCE: Sect. Behavioral Neuropharmacology, Experimental Therapeutics Branch, NIMH, Bethesda, MD 20892, USA
SOURCE: Society for Neuroscience Abstracts, (1994) Vol. 20, No. 1-2, pp. 150.
Meeting Info.: 24th Annual Meeting of the Society for Neuroscience. Miami Beach, Florida, USA. November 13-18, 1994.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 31 Oct 1994
Last Updated on STN: 16 Dec 1994

L11 ANSWER 57 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1994:49465 BIOSIS
DOCUMENT NUMBER: PREV199497062465
TITLE: Noradrenergic lesioning using anti-DBH **immunotoxin**
AUTHOR(S): Picklo, M. J. [Reprint author]; **Wiley, R. G.**; **Lappi, D.**; Robertson, D.
CORPORATE SOURCE: Dep. Pharmacol., Vanderbilt Univ., Nashville, TN 37232, USA
SOURCE: Society for Neuroscience Abstracts, (1993) Vol. 19, No. 1-3, pp. 1890.
Meeting Info.: 23rd Annual Meeting of the Society for Neuroscience. Washington, D.C., USA. November 7-12, 1993.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 3 Feb 1994
Last Updated on STN: 3 Feb 1994

L11 ANSWER 58 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1994:52587 BIOSIS
DOCUMENT NUMBER: PREV199497065587
TITLE: Passive avoidance learning and anatomical effects of intra-ventricular **immunotoxin** to p75-NGFr.
AUTHOR(S): **Wiley, R. G.**; Berbos, T. G.; **Lappi, D.**
CORPORATE SOURCE: Lab. Experimental Neurol., DVAMC, Nashville, TN 37212-2637, USA
SOURCE: Society for Neuroscience Abstracts, (1993) Vol. 19, No. 1-3, pp. 1231.
Meeting Info.: 23rd Annual Meeting of the Society for Neuroscience. Washington, D.C., USA. November 7-12, 1993.
ISSN: 0190-5295.

DOCUMENT TYPE: Conference; (Meeting)
Conference; (Meeting Poster)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 3 Feb 1994
Last Updated on STN: 3 Feb 1994

L11 ANSWER 59 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1994:50764 BIOSIS
DOCUMENT NUMBER: PREV199497063764
TITLE: Selective cholinergic deafferentation following intracortical infusions of the **immunotoxin** 192 IgG-**saporin**.
AUTHOR(S): Sarter, M. [Reprint author]; Holley, L. A. [Reprint author]; **Wiley, R. G.**; **Lappi, D. A.**
CORPORATE SOURCE: Dep. Psychol., Ohio State Univ., Columbus, OH 43210, USA
SOURCE: Society for Neuroscience Abstracts, (1993) Vol. 19, No. 1-3, pp. 914.
Meeting Info.: 23rd Annual Meeting of the Society for Neuroscience. Washington, D.C., USA. November 7-12, 1993.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 3 Feb 1994
Last Updated on STN: 3 Feb 1994

L11 ANSWER 60 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1993:175656 BIOSIS
DOCUMENT NUMBER: PREV199344083256
TITLE: Neuropathological and behavioral effects of intraventricular **immunotoxin** to the nerve growth factor receptor.
AUTHOR(S): **Wiley, R. G.** [Reprint author]; Berbos, T.; Ward, M.; **Lappi, D. A.**
CORPORATE SOURCE: Neurol. Serv., DVAMC, Nashville, TN 27212-2637, USA
SOURCE: Society for Neuroscience Abstracts, (1992) Vol. 18, No. 1-2, pp. 1245.
Meeting Info.: 22nd Annual Meeting of the Society for Neuroscience. Anaheim, California, USA. October 25-30, 1992.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
LANGUAGE: English
ENTRY DATE: Entered STN: 2 Apr 1993
Last Updated on STN: 2 Apr 1993

L11 ANSWER 61 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1992:321985 BIOSIS
DOCUMENT NUMBER: PREV199243022710; BR43:22710
TITLE: DESTRUCTION OF CHOLINERGIC FOREBRAIN USING **IMMUNOTOXIN** TO THE NGF RECEPTOR.
AUTHOR(S): **WILEY R G** [Reprint author]; **LAPPI D A**
CORPORATE SOURCE: NASHVILLE, TENN, USA
SOURCE: Neurology, (1992) Vol. 42, No. 4 SUPPL. 3, pp. 448.

Meeting Info.: 44TH ANNUAL MEETING OF THE AMERICAN ACADEMY OF NEUROLOGY, SAN DIEGO, CALIFORNIA, USA, MAY 3-9, 1992. NEUROLOGY.
CODEN: NEURAI. ISSN: 0028-3878.
DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 30 Jun 1992
Last Updated on STN: 30 Jun 1992

L11 ANSWER 62 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1991:336025 BIOSIS
DOCUMENT NUMBER: PREV199141032575; BR41:32575
TITLE: DESTRUCTION OF SYMPATHETIC NEURONS IN-VIVO USING AN **IMMUNOTOXIN**.
AUTHOR(S): **WILEY R G** [Reprint author]; OELTMANN T N; **LAPPI D A**
CORPORATE SOURCE: NASHVILLE, TENN, USA
SOURCE: Neurology, (1991) Vol. 41, No. 3 SUPPL. 1, pp. 417.
Meeting Info.: 43RD ANNUAL MEETING OF THE AMERICAN ACADEMY OF NEUROLOGY, BOSTON, MASSACHUSETTS, USA, APRIL 20-27, 1991. NEUROLOGY.
CODEN: NEURAI. ISSN: 0028-3878.
DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 20 Jul 1991
Last Updated on STN: 20 Jul 1991

L11 ANSWER 63 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1992:158887 BIOSIS
DOCUMENT NUMBER: PREV199242075087; BR42:75087
TITLE: IMMUNOLESIONING SELECTIVE DESTRUCTION OF CENTRAL AND PERIPHERAL NEURONS IN-VITRO USING AN **IMMUNOTOXIN** TO THE RAT NGF RECEPTOR.
AUTHOR(S): **WILEY R G** [Reprint author]; OELTMANN T N; **LAPPI D A**
CORPORATE SOURCE: LAB EXP NEUROL, DVAMC, NASHVILLE, TENN 37212, USA
SOURCE: Society for Neuroscience Abstracts, (1991) Vol. 17, No. 1-2, pp. 222.
Meeting Info.: 21ST ANNUAL MEETING OF THE SOCIETY FOR NEUROSCIENCE, NEW ORLEANS, LOUISIANA, USA, NOVEMBER 10-15, 1991. SOC NEUROSCI ABSTR.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 18 Mar 1992
Last Updated on STN: 18 Mar 1992

```
=> d his nofil

     (FILE 'HOME' ENTERED AT 12:07:36 ON 13 SEP 2006)

     FILE 'REGISTRY' ENTERED AT 12:16:35 ON 13 SEP 2006
L1             0 SEA ABB=ON  PLU=ON  CYGGGGGGRPKPQQFFGLM/SQSP

=> d que l1
L1             0 SEA FILE=REGISTRY ABB=ON  PLU=ON  CYGGGGGGRPKPQQFFGLM/SQSP
```